



Business Airplanes 2014

For now, there remains **a chasm in demand** between the long-range, large-cabin class and the rest of the turboprop market.

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Business jet apartheid remained the dominant theme in 2013, as it has for the last five years since the world economy struggles to recover from its deepest downturn in eight decades. Most long-range, large-cabin business aircraft manufacturers flourished while most light and midsize jet makers floundered. Total jet deliveries stabilized at 678, essentially in line with deliveries a decade ago, according to GAMA statistics.

Jet deliveries actually dipped about 1% from 2012 to 2013, but billing soared 23% with Gulfstream leading the way with 144 large-cabin deliveries. Bombardier shipped 62 Global 5000 and 6000 aircraft, Dassault Falcon Jet delivered 77 units and Embraer logged 21 Legacy 600/650 shipments.

Corporate profitability has more than doubled since the bottom of the recession. The S&P index is up 170% since first quarter 2009. For now, the DJIA seems solidly locked in above 16,000. So, large corporations, especially multinationals,

have fat profits to renew their large-cabin aircraft fleets.

Public companies aren't the only beneficiaries of the post-recession recovery. There now are more than 60,000 high net worth individuals (HNWIs) around the globe who have \$100 million or more in disposable assets, according to some surveys. The largest concentration of uber-rich isn't in North America, it's in Asia.

Large corporations and top tier HNWIs, as a result, are fueling the sales of purpose-built business aircraft with \$30-million-plus price tags, ones that can fly 4,000+ nm. Top tier aircraft that can fly 5,000 to 7,000 nm and that sell for \$50- to \$100-million, are doing especially well. Bombardier, for instance, delivered 94% more Global 5000/6000 aircraft than shorter range Challenger 605 jets.

Gulfstream doesn't disclose delivery numbers for individual large-cabin aircraft, but it's well known that the G550 and G650 are faring much better than the G450, judging from relative resale prices.

Dassault shipped more Falcon 7X

trijets than all other Falcon models combined. Industry sources say that Dassault plans to announce another large cabin aircraft at EBACE 2014 in Geneva, capitalizing on the sales strength of Falcon 7X.

In the light-jet segment, it was a different, if not depressing, story. Textron Aviation's Cessna was hit particularly hard, delivering fewer Citations in 2013 than in any year since 1996. Deliveries of Bombardier Learjet 60XR continue to wind down as customers shift their interest toward the Learjet 85, which just made its first flight in April. The Canadian firm delivered 18 of its Learjet 70/75 aircraft, thoroughly revamped versions of Learjet 40XR/45XR, late in the fourth quarter. The late year, Learjet 70/75 delivery rush buoys prospects for a better 2014. But, company chairman Guy Hachey cautions that the overall "global economy has remained persistently sluggish," damping expectations for a full-blown business aircraft recovery in 2014.

Beechcraft, newly merged into Textron Aviation, fared even more poorly with its turboprop aircraft. It ceased production of all jets and disposed of its remaining Hawker 4000 aircraft at fire sale prices.

Deep discounting by U.S. light jet makers remained a dominant practice in 2013. The downside of new aircraft discounting, though, is pronounced price softness in the used light-jet market. Many older

light jets have so little residual value that operators are facing stiff cash outlays when trading up to new aircraft. That's another drag on new light jet sales.

Undeterred, Eclipse Aerospace is pressing ahead with its Eclipse 550 very light jet, having a \$2.85 million base price. Eclipse is betting that the upgraded Eclipse 500 will hold its own in the market because of its rock bottom operating costs.

Equally optimistic is Honda Aircraft Company, proceeding apace with development of its \$4.5 million, twin-turboprop HA-420 HondaJet. It's a direct competitor with Embraer Phenom 100 and Cessna Citation M2, the upgraded version of CJ1+.

Bombardier is pressing ahead at full speed with Learjet 85, the Canadian firm's new midsize jet that made its first flight in mid-April. The entry-into-service data for the all-composite, transcontinental U.S. range jet has yet to be determined, but it should reach full production rates by 2018, according to RBC Europe's market analyst Robert Stallard.

At present, Embraer remains in a strong position with its Phenom light jets. Last year, it delivered 60 Phenom 300 light jets, grabbing market share mainly at the expense of Cessna Citation CJ3 and CJ4. Admittedly, the Brazilian firm saturated the entry level jet segment in 2009 and 2010 when it delivered a total of 197 Phenom 100 aircraft. But, it still delivered more Phenom 300 units in 2013 than either Citation Mustang or M2.

Cessna is fighting back against Phenom 300 with upgraded versions of its existing models, including the CJ3+ that is making its *Purchase Planning Handbook* debut this year.

Some in the industry, though, say that Cessna's historic reliance on derivative designs, many of which have their roots in the original 1969 FanJet 500, is leaving the door open for Embraer to enter with its clean sheet designs, such as the Phenoms, and also for planemaker HondaJet. Buyers are no longer satisfied with evolutionary Mr. Potato Head derivatives, distinguished mainly by changes in their plug-in body parts.

Now, Embraer is again introducing disruptive technology with its Legacy 500, the first fly-by-wire midsize business jet. (See our flight test report on page 62 in this issue). It's priced \$2 million higher than Citation Sovereign, but it's a clean-sheet design with a much larger cabin having a flat floor. It has higher cruise speeds and more tanks-full payload.

With 3,000 nm range and a \$20 million

price tag, Legacy 500 also will compete with the midsize Learjet 85. Its super-midsize cabin even makes competitive with Bombardier Challenger 300, the bestselling super-midsize aircraft. Bombardier is countering the Brazilians by offering Challenger 350, a longer range, more capable, more fuel efficient version of Challenger 300.

Potentially dealing another one-two body punch to Cessna, similar to Phenom 100 and 300, Embraer's Legacy 450 is slated to enter service in 2015. It will compete head-to-head against Citation Latitude, a larger fuselage version of Citation Sovereign. Both aircraft have 2,500 nm range and similar price tags, but Legacy 450 has fly-by-wire flight controls, higher cruise speeds and a larger cabin.

The Legacy 450 is priced \$2 million above the Learjet 60XR, but it does virtually everything better than the aging Bombardier midsize jet, having a considerably larger cabin, more range and more tanks-full payload.

The growth in turboprop shipments was a boon to manufacturers. Deliveries grew more than 10% in 2013, according to GAMA. Leading the way was Textron Aviation's Beechcraft unit that experienced a 50+ surge in King Air shipments. More than half were King Air 350 models, many of which were delivered to Wheels Up, a "members only" firm that placed the largest turboprop order in history.

Piaggio Aero remains a notable exception to the success in the twin turboprop segment. Shipments sagged to just two new Avanti II aircraft last year as the firm reels from the crash of fractional ownership firm Avantair, leaving behind dozens of unairworthy Avanti aircraft because of shoddy maintenance. Many former Avantair aircraft now face cannibalization. (See "The Avantair Failure, Part 2" on page 30 in this issue.)

The single-engine turboprop segment was a bright spot last year. Deliveries of Cessna's 208 Caravan and 208B Grand Caravan reached 105 units, only two down from 2012 and higher than the annual average of the last two decades. Quest delivered 28 Kodiak 100 utility aircraft, the larger number in its history.

Deliveries of pressurized singles remain robust. Piper shipped 34 Meridian aircraft, Socata delivered 40 TBM 850 G1000 turboprops and Pilatus shipped 65 PC-12s. Socata's 330 KTAS TBM 900 is appearing for the first time in this year's Handbook. It has 21% shorter takeoff distances, superior time to climb and 17-kt. faster cruise speeds than TBM 850, along

with slower stall speeds, more docile low speed handling and a quieter cabin. It's actually faster than some light jets on trips up to two hours duration.

Asking prices for most new single-engine turboprops, as a result, are firm. There's little motivation for most manufacturers, particularly Pilatus and Socata, to negotiate on list price.

Looking ahead at the remainder of 2014, small businesses in the U.S., firms that historically have purchased the majority of light jets, continue to struggle. Owners remain unsettled about the prospects for a broad-based economic recovery, as well as the threat of new federal mandates. Most historic light jet buyers are in no mood to purchase new aircraft, keeping a tight rein on purse strings, preserving capital for unknown threats ahead.

The Federal Reserve has expressed concerns that U.S. economic inflation is too low at 1%, half the target rate for healthy economic growth. Low consumer prices would seem to be a boon, but low inflation also signifies poor wage growth, high unemployment and excess economic capacity. European economic inflation is near zero, prompting concerns that the world economy could be at risk for deflation. Such news rattles the confidence of small businesses.

Moreover, the pre-owned light jet market remains awash with great deals to be scooped up by savvy shoppers. True, a certain segment of buyers only purchases new aircraft. For them, only a new Mustang, M2 or Eclipse 550, HondaJet or Learjet 75, will suffice.

But, large numbers of prospects, outside of that select few that only buy new, find themselves tempted by \$1.5 million Mustangs, \$1.9 million CJ1+ aircraft and Phenom 100s, and \$3.5 million Learjet 45XR aircraft, among other bargains in the basement.

So, for now, there remains a huge chasm in demand between the long-range, large-cabin class and the rest of the turboprop market. If you're shopping for a new aircraft with less than 5,000 nm of range, you'll find sales staffs willing to sharpen their pencils to get you to sign their purchase contracts. This year will be another bonanza for many buyers. **B&CA**

 **B&CA's digital edition contains**
Used Airplanes and Regional Aircraft comparative tables. The Purchase Planning Handbook is available for download at AviationWeek.com/bca

How to Use the Airplane Charts

For an aircraft to be listed in the *Purchase Planning Handbook*, a production conforming article must have flown by May 1 of this year. The dimensions, weights and performance characteristics of each model listed are representative of the current production aircraft being built or for which a type certificate application has been filed. The Basic Operating Weights we publish should be representative of actual production turboprop and turbofan aircraft because we ask manufacturers to supply us with the average weights of the last 10 commercial aircraft that have been delivered. However, spot checks of some manufacturers' BOW numbers reveal anomalies. Prospective buyers are advised to verify the actual weights of aircraft with options.

The takeoff field length distances are based on Maximum Takeoff Weight unless otherwise indicated in the tables.

Please note that "all data preliminary" in the remarks section indicates that actual aircraft weight, dimension and performance numbers may vary considerably after the model is certified and delivery of completed aircraft begins.

Manufacturer, Model and Type Designation

In some cases, the airplane manufacturer's name is abbreviated, but the company's full name and address can be found in the "Airframe Suppliers Directory" at our website. The model name and the type designation also are included in this group.

B&CA Equipped Price

Price estimates are first quarter, current year dollars for the next available delivery. Some aircraft have long lead times, thus the actual price will be higher than our published price. Note well, manufacturers may adjust prices without notification.

► **Piston-powered airplanes** — Computed retail price with at least the level of equipment specified in the *B&CA* Required Equipment List.

► **Turbine-powered airplanes** — Average price of 10 of the last 12 commercial deliveries, if available. Some manufacturers decline to provide us with actual prices of delivered aircraft. The aircraft serial numbers aren't necessarily consecutive because of variations in completion

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time and because some aircraft may be configured for non-commercial, special missions.

Characteristics

► **Seating** — Crew + Typical Executive Seating/Maximum Seating.

For example, 2+8/19 indicates that the aircraft requires two pilots, there are eight seats in the typical executive configuration and the aircraft is certified for up to 19 passenger seats. A four-place single-engine aircraft is shown as 1+3/3, indicating that one pilot is required and there are three other seats available for passengers. We require two pilots for all turboprop airplanes, except for single-pilot certified aircraft such as the Eclipse 550, Cessna Citation CJ series and Syberjet SJ30-2, which have, or will have, a large percentage of single-pilot operators. Four crewmembers are specified for ultra-long-range aircraft — three pilots and one flight attendant.

Each occupant of a turbine-powered airplane is assumed to weigh 200 lb., thus allowing for stowed luggage and carry-on items. In the case of piston-engine airplanes, we assume each occupant weighs 170 lb. There is no luggage allowance for piston-engine airplanes.

► **Wing Loading** — MTOW divided by total wing area.

► **Power Loading** — MTOW divided by total rated horsepower or total rated thrust.

► **FAR Part 36 certified noise levels** — Flyover noise in A-weighted decibels (dBA) for small and turboprop aircraft. For turboprop-powered aircraft, we provide

Part 36 EPNdB (effective perceived noise levels) for takeoff, sideline and approach.

Dimensions

► **External length, height and span dimensions** are provided for use in determining hangar and/or tie-down space requirements.

Internal length, height and width are based on a completed interior, including insulation, upholstery, carpet, carpet padding and fixtures. Note well: These dimensions are not based upon metal-to-metal measurements. They must reflect the actual net dimensions with all soft goods installed. Some manufacturers provide optimistic measurements, thus prospective buyers are advised to measure aircraft themselves.

As shown in the Cabin Interior Dimensions illustration, for small airplanes other than “cabin-class” models, the length is measured from the forward bulkhead ahead of the rudder pedals to the back of the rearmost passenger seat in its normal, upright position.

For so-called cabin-class and larger aircraft, we show the overall length of the passenger cabin, measured from the aft side of the forward cabin divider to the aft-most bulkhead of the cabin. The aft-most point is defined by the rear side of a baggage compartment that is accessible to passengers in flight or the aft pressure bulkhead. The overall length is reduced by the length of any permanent mounted system or structure that is installed in the fuselage ahead of the aft bulkhead. For example, some aircraft

have full fuselage cross-section fuel tanks mounted ahead of the aft pressure bulkhead.

The second length number is the net length of the cabin that may be occupied by passengers. It's measured from the aft side of the forward cabin divider to an aft point defined by the rear of the cabin floor capable of supporting passenger seats, the rear wall of an aft galley or lavatory, an auxiliary pressure bulkhead or the front wall of the pressurized baggage compartment. Some aircraft have the same net and overall interior length because the manufacturer offers at least one interior configuration with the aft-most passenger seat located next to the front wall of the aft luggage compartment.

Interior height is measured at the center of the cross section. It may be based on an aisle that is dropped several inches below the main cabin floor that supports the passenger seats. Some aircraft have dropped aisles of varying depths, resulting in less available interior height in certain sections of the cabin, such as the floor sections below the passenger seats.

Two width dimensions are shown for multiengine turbine airplanes — one at the widest part of the cabin and the other at floor level. The dimensions, however, are not completely indicative of the usable space in a specific aircraft because of individual variances in interior furnishings.

Power

► **Number of engines**, if greater than one, and the abbreviated name of the manufacturer: Honeywell, CFMI — CFM International, TCM — Teledyne Continental, IAE — International Aero Engines, Ly — Textron Lycoming, P&WC — Pratt & Whitney Canada, RR — Rolls-Royce and Wms — Williams International.

► **Output** — Takeoff rated horsepower for propeller-driven aircraft or pounds thrust for turboprop aircraft. If an engine is flat rated, enabling it to produce takeoff rated output at a higher than ISA (standard day) ambient temperature, the flat rating limit is shown as ISA+XXC. Highly flat rated engines, i.e. engines that can produce takeoff rated thrust at a much higher than standard ambient temperature, typically provide substantially improved high density altitude and high-altitude cruise performance.

► **Inspection Interval** is the longest, scheduled hourly major maintenance interval for the engine, either “t” for TBO or “c” for compressor zone inspection.



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OC is shown only for engines that have “on condition” repair or replace parts maintenance.

Weights (lb.)

Weight categories are listed as appropriate to each class of aircraft.

► **Max Ramp** – Maximum ramp weight for taxi

► **Max Takeoff** – Maximum takeoff weight as determined by structural limits

► **Max Landing** – Maximum landing weight as determined by structural limits

► **Zero Fuel** – Maximum zero fuel weight, shown by “c,” indicating the certified MZFW or “b,” a B&CA-computed weight based on MTOW minus the weight of fuel required to fly 1.5 hr. at high-speed cruise

► **Max ramp, max takeoff and max landing** weights may be the same for light aircraft that may only have a certified max take-off weight.

► **EOW/BOW** – Empty Operating Weight is shown for piston-powered airplanes. Basic Operating Weight, in contrast, is based on the average EOW weight of the last 10 commercial deliveries, plus 200 lb. for each required crewmember. We require four crewmembers, three flight crew and one cabin attendant for ultra-long-range aircraft.

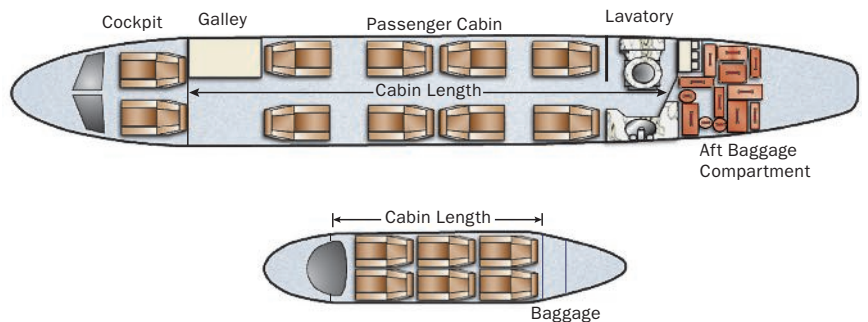
Basic Operating Weight, which essentially is EOW plus required flight crew, is shown for turbine-powered airplanes. EOW is based on the factory standard weight, plus items specified in the B&CA Required Equipment List, less fuel and oil.

There is no requirement to add in the weight of cabin stores, but some manufacturers choose to include galley stores and passenger supplies as part of the BOW build up. Life vest, life rafts and appropriate deep-water survival equipment are included in the weight buildup of the 80,000+ lb., ultra-long-range aircraft.

► **Max Payload** – Zero Fuel weight minus EOW or BOW, as appropriate. For piston-engine airplanes, Max Payload frequently is a computed value because it is based on the B&CA (“b”) computed maximum ZFW.

► **Executive Payload** – Based on 170 lb. per occupant for multiengine piston-engine airplanes and 200 lb. per occupant for turbine-engine airplanes, as shown in the executive seating section of the “Characteristics” section. Both pilots and passengers, however, are counted as occupants in piston-engine airplanes. Only passengers are counted as occupants in turbine-powered airplanes because the required crew is included in the BOW.

Cabin Length



If the Executive Payload exceeds the Maximum Payload, we use Maximum Payload. Executive payload is not computed for single-engine piston airplanes.

► **Max Fuel** – Usable fuel weight based on 6.0 lb. per U.S. gallon for avgas or 6.7 lb. per U.S. gallon for jet fuel. Fuel capacity includes optional, auxiliary and long-range tanks, unless otherwise noted.

► **Available Payload With Full Fuel** – Max Ramp weight minus the tanks-full weight, not to exceed Zero Fuel weight minus EOW or BOW.

► **Available Fuel With Maximum Payload** – Maximum Ramp weight minus Zero Fuel weight, not to exceed maximum fuel capacity.

► **Available Fuel With Executive Payload** – Available fuel weight based on max ramp minus BOW plus executive payload, up to the actual fuel capacity.

Limits

B&CA lists V speeds and other limits as appropriate to the class of airplane. These are the abbreviations used on the charts:

► **VNE** – Never exceed speed (red line for piston-engine airplanes).

► **Vno** – Normal operating speed (top of the green arc for piston-engine airplanes).

► **Vmo** – Maximum operating speed (red line for turbine-powered airplanes).

► **Mmo** – Maximum operating Mach number (red line for turbofan-powered airplanes and a few turboprop airplanes).

► **FL/Vmo** – Transition altitude at which Vmo equals Mmo (large turboprop and turbofan aircraft).

► **Va** – Maneuvering speed (except for

certain large turboprop and all turbofan aircraft).

► **Vdec** – Accelerate/stop decision speed (multiengine piston and light multiengine turboprop airplanes).

► **Vmca** – Minimum control airspeed, air-borne (multiengine piston and light multiengine turboprop airplanes).

► **Vso** – Maximum stalling speed, landing configuration (single-engine airplanes)

► **Vx** – Best angle-of-climb speed (single-engine airplanes).

► **Vxse** – Best angle-of-climb speed, one-engine inoperative (multiengine piston and multiengine turboprop airplanes under 12,500 lb.).

► **Vy** – Best rate-of-climb speed (single-engine airplanes).

► **Vyse** – Best rate-of-climb speed, one-engine inoperative (multiengine piston and multiengine turboprop airplanes under 12,500 lb.).

► **V2** – Takeoff safety speed (large turboprops and turbofan airplanes).

► **Vref** – Reference landing approach speed (large turboprops and turbofan airplanes, four passengers, NBAA IFR reserves; eight passengers for ultra-long-range aircraft).

► **PSI** – Cabin pressure differential (all pressurized airplanes).

Airport Performance

► Approved Flight Manual takeoff runway performance is shown for sea-level, standard day and for 5,000-ft. elevation/25C day density altitude. All-engine takeoff distance (TO) is shown for single-engine and multiengine piston, and turboprop airplanes with an MTOW

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of less than 12,500 lb. Takeoff distances and speeds assume Maximum Takeoff weight, unless otherwise noted.

► **Accelerate/Stop distance (A/S)** is shown for small multiengine piston and small turboprop airplanes. Takeoff field length (TOFL), the greater of the one-engine inoperative (OEI) takeoff distance or the accelerate/stop distance, is shown for FAR Part 23 Commuter Category and FAR Part 25 airplanes. If the accelerate/stop and accelerate/stop distances are equal, the TOFL is the balanced field length.

► **Landing distance (LD)** is shown for FAR Part 23 Commuter Category and FAR Part 25 Transport Category airplanes. The landing weight is BOW plus four passengers and NBAA IFR fuel reserves. We assume that 80,000+ lb. ultra-long-range

aircraft will have eight passengers on board.

The V₂ and V_{REF} speeds are useful for reference when comparing the TOFL and LD numbers because they provide an indication of potential minimum-length runway performance when low RCR or runway gradient is a factor.

B&CA lists two additional numbers for large turboprop- and turbofan-powered airplanes. First, we publish the mission weight, which is the lower of: (1) the actual takeoff weight with four passengers (eight passengers for ultra-long-range aircraft) and full fuel when departing from a 5,000-ft./25C airport or (2) the maximum allowable takeoff weight when departing with the same passenger load and at the same density altitude.

For two-engine aircraft, the mission

weight, when departing from a 5,000-ft./ISA+20C airport, may be less than the MTOW because of FAR Part 25 second-segment, one-engine-inoperative, climb performance requirements. Aircraft with highly flat-rated engines are less likely to have a Mission Weight that is performance limited when departing from hot and high airports.

For three-engine aircraft, the mission weight usually is based on full tanks and the actual number of passengers, rather than being performance limited.

Second, we publish the NBAA IFR range for the hot and high departure mission weight, assuming a transition into standard day, ISA flight conditions after takeoff. For purposes of computing NBAA IFR range, the aircraft is flown at the long-range cruise speed shown in the “Cruise” block or at the same speed as shown in the “Range” block.

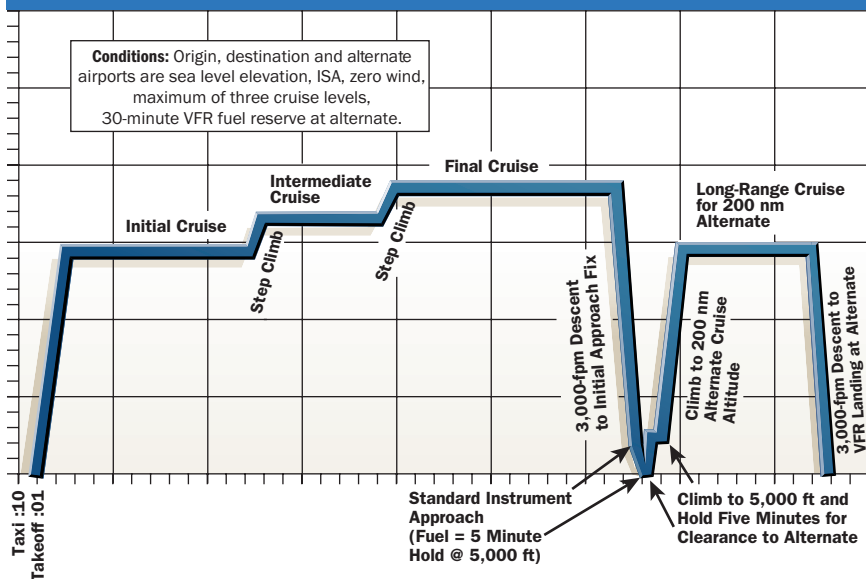
Climb

The all-engine time to climb provides an indication of overall climb performance, especially if the aircraft has an all-engine service ceiling well above our sample top-of-climb altitudes. We provide the all-engine time to climb to one of three specific altitudes, based on type of aircraft departing at MTOW from a sea-level, standard-day airport: (1) FL 100 (10,000 ft.) for normally aspirated single-engine and multiengine piston aircraft, plus pressurized single-engine piston aircraft and unpressurized turboprop aircraft; (2) FL 250 for pressurized single-engine and multi-engine turboprop aircraft; or (3) FL 370 for turbofan-powered aircraft. These data are published as time-to-climb in minutes/climb altitude. For example, if a non-pressurized twin-engine piston aircraft can depart from a sea-level airport at MTOW and climb to 10,000 ft. in 8 min., the time to climb is expressed as 8/FL 100.

We also publish the initial all-engine climb feet per nautical mile gradient, plus initial engine-out climb rate and gradient, for single-engine and multiengine pistons and turboprops with MTOWs of 12,500 lb. or less.

The one-engine-inoperative (OEI) climb rate for multi-engine aircraft at MTOW is derived from the Airplane Flight Manual. OEI climb rate and gradient is based on landing gear retracted and wing flaps in the takeoff configuration used to compute the published takeoff distance. The climb gradient for such airplanes is obtained by dividing the product of the climb rate (fpm) in the

NBAA IFR Range Profile





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Airplane Flight Manual times 60 by the VY or VYSE climb speed, as appropriate.

The OEI climb gradients we show for FAR Part 23 Commuter Category and FAR Part 25 Transport Category aircraft are the second-segment net climb performance numbers published in the AFMs. Please note: The AFM net second-segment climb performance numbers are adjusted downward by 0.8% to compensate for variations in pilot technique and ambient conditions.

The OEI climb gradient is computed at the same flap configuration used to calculate the takeoff field length.

Ceilings (ft.)

- ▶ **Maximum Certificated Altitude** – Maximum allowable operating altitude determined by airworthiness authorities.
- ▶ **All-Engine Service Ceiling** – Maximum altitude at which at least a 100-fpm rate of climb can be attained, assuming the aircraft departed a sea-level, standard-day airport at MTOW and climbed directly to altitude.
- ▶ **OEI (Engine Out) Service Ceiling** – Maximum altitude at which a 50-fpm rate of climb can be attained, assuming the aircraft departed a sea-level, standard-day

airport at MTOW and climbed directly to altitude.

- ▶ **Sea-Level Cabin (SLC) Altitude** – Maximum cruise altitude at which a 14.7-psia, sea-level cabin altitude can be maintained in a pressurized airplane.

Cruise

Cruise performance is computed using EOW with four occupants or BOW with four passengers and one-half fuel load. Ultra-long-range aircraft carry eight passengers for purposes of computing cruise performance.

Assume 170 lb. for each occupant of a piston-engine airplane and 200 lb. for each occupant of a turbine-powered aircraft.

- ▶ **Long Range** – True Air Speed (TAS), fuel flow in pounds/hour, flight level (FL) cruise altitude and specific range for long-range cruise by the manufacturer.
- ▶ **Recommended** (Piston-Engine Airplanes) – TAS, fuel flow in pounds/hour, FL cruise altitude and specific range for normal cruise performance specified by the manufacturer.
- ▶ **High Speed** – TAS, fuel flow in pounds/hour, FL cruise altitude and specific range for short-range, high-speed

performance specified by the aircraft manufacturer.

- ▶ **Speed, fuel flow, specific range and altitude** in each category are based on one mid-weight cruise point and these data reflect standard day conditions. They are not an average for the overall mission and they are not representative of the above standard day temperatures at cruise altitudes commonly encountered in everyday operations.

B&CA imposes a 12,000-ft. maximum cabin altitude requirement on CAR3/FAR Part 23 normally aspirated aircraft. Turbocharged airplanes are limited to FL 250, providing they are fitted with supplemental oxygen systems having sufficient capacity for all occupants for the duration of the mission. Pressurized CAR3/FAR Part 23 aircraft are limited to a maximum cabin altitude of 10,000 ft. For FAR Part 23 Commuter Category and FAR Part 25 aircraft, the maximum cabin altitude for computing cruise performance is 8,000 ft.

To conserve space, we use flight levels (FL) for all cruise altitudes, which is appropriate considering that we assume standard day ambient temperature and pressure conditions. Cruise performance is subject to B&CA's verification.

Range

B&CA shows various paper missions for each aircraft that illustrate range versus payload tradeoffs, runway and cruise performance, plus fuel efficiency. Similar to the cruise profile calculations, *B&CA* limits the maximum altitude to 12,000 ft. for normally aspirated, non-pressurized CAR3/FAR Part 23 aircraft, 25,000 ft. for turbocharged airplanes with supplemental oxygen, 10,000 ft. cabin altitude for pressurized CAR 3/FAR Part 23 airplanes and 8,000 ft. cabin altitude for FAR Part 23 Commuter Category or FAR Part 25 aircraft.

► **Seats-Full Range (Single-Engine Piston Airplanes)** — Based on typical executive configuration with all seats filled with 170 lb. occupants, with maximum available fuel less 45-min. IFR fuel reserves. We use the lower of seats full or maximum payload.

► **Tanks Full Range (Single-Engine Piston Airplanes)** — Based on one 170-lb. pilot, full fuel less 45-min. IFR fuel reserves.

► **Executive Payload (Multiengine Piston Airplanes and Single-Engine Turboprops)** — Based on typical executive configuration with all seats filled with 170-lb. occupants, maximum available fuel less 45-min. IFR fuel reserves. We use the lower of seats full or maximum payload.

► **Maximum Fuel With Available Payload (Single-Engine Turboprops)** —Based on BOW, plus full fuel and the maximum available payload up to maximum ramp weight. Range is based on arriving at destination with NBAA IFR fuel reserves, but only a 100-mi. alternate is required.

► **Ferry (Multiengine Piston Airplanes and Single-Engine Turboprops)** — Based on one

170-lb. pilot, maximum fuel less 45-min. IFR fuel reserves.

Please note: None of the missions for piston-engine aircraft includes fuel for diverting to an alternate. However, single-engine turboprops are required to have NBAA IFR fuel reserves, but only a 100 mi. alternate is required.

NBAA IFR range format cruise profiles, having a 200 mi. alternate, are used for FAR Part 25 Transport Category turbine-powered aircraft. In the case of FAR Part 23 turboprops, including those certified in the Commuter Category, and FAR Part 23 turboprop aircraft, only a 100 mi. alternate is needed. The difference in alternate requirements should be kept in mind when comparing range performance of various classes of aircraft.

► **Available Fuel With Maximum Payload (Multiengine Turbine Airplanes)** —Based on aircraft loaded to maximum zero fuel weight with maximum available fuel up to maximum ramp weight, less NBAA IFR fuel reserves at destination.

► **Available Payload With Maximum Fuel (Multiengine Turbine Airplanes)** —Based on BOW plus full fuel and maximum available payload up to maximum ramp weight. Range based on NBAA IFR reserves at destination.

► **Full/Maximum Fuel With Four Passengers (Multiengine Turbine Airplanes)** —Based on BOW plus four 200-lb. passengers and the lesser of full fuel or maximum available fuel up to maximum ramp weight. Ultra-long-range aircraft must have eight passengers on board.

► **Ferry (Multiengine Turbine Airplanes)** — Based on BOW, required crew and full fuel, arriving at destination with NBAA IFR fuel reserves.

We allow 2,000-ft. increment step

NOTICE TO READERS

During recent years, the U.S. Federal Trade Commission has conducted investigations into the practice of certain industries in fixing and advertising list prices. It is the position of the FTC that it is deceptive to the public and against the law for list prices of any product to be specified or advertised in a trade area if the majority of sales are made at less than those prices.

B&CA is not in a position to know the prices for most of the sales in each trading area in the United States for each of the products in this issue. Therefore, the prices shown in the tables and text in the *Purchase Planning Handbook* are based on suggested list prices furnished to us by the manufacturers or distributors, or on prices estimated by the editors. It may be possible to purchase some items in your trading area at prices less than those reported in this issue of *B&CA*. Also, almost all manufacturers and distributors caution that prices are subject to change without notice.

climbs above the initial cruise altitude to improve specific range performance, even though current air traffic rules in North America provide for 4,000-ft. altitude semicircular directional traffic separation above FL 290. The altitude shown in the range section is the highest cruise altitude for the trip — not the initial cruise or mid-mission altitude.

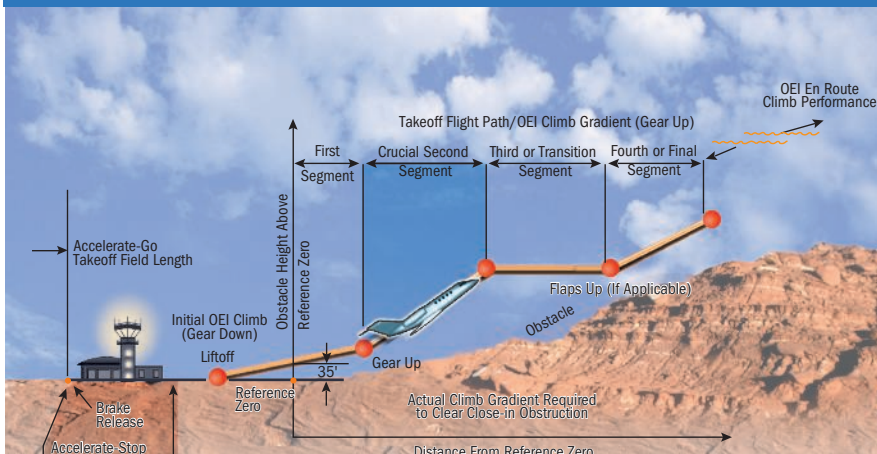
The range profiles are in nautical miles, and the average speed is computed by dividing that distance by the total flight time or weight-off-wheels time en route. The Fuel Used or Trip Fuel includes the fuel consumed for start, taxi, takeoff, cruise, descent and landing approach but not after-landing taxi or reserves.

The Specific Range is obtained by dividing the distance flown by the total fuel burn. The Altitude is the highest cruise altitude achieved on the specific mission profile shown.

Missions

Various paper missions are computed to illustrate the runway requirements, speeds, fuel burns and specific range, plus cruise altitudes. The mission ranges are chosen to be representative for the airplane category. All fixed-distance missions are flown with four passengers on board, except for ultra-long-range airplanes, which have eight passengers on board. The pilot is counted as a passenger on board piston-engine

FAR Part 25 and Part 23 Commuter Category OEI Climb Performance



B&CA Required Equipment List

airplanes. If an airplane cannot complete a specific fixed distance mission with the appropriate payload, *B&CA* shows a reduction of payload in the remarks section or marks the fields NP (Not Possible) at our option.

Runway performance is obtained from the Approved Airplane Flight Manual. Takeoff distance is listed for single-engine airplanes; accelerate/stop distance is listed for piston twins and light turboprops; and takeoff field length, which often corresponds to balanced field length, is used for FAR Part 23 Commuter Category and FAR Part 25 large Transport Category airplanes.

Flight Time (takeoff to touchdown, or weight-off-wheels, time) is shown for turbine airplanes. Some piston-engine manufacturers also include taxi time, resulting in a chock-to-chock, Block Time measurement. Fuel Used, though, is the actual block fuel burn for each type of aircraft, but it does not include fuel reserves. The cruise altitude shown is that which is specified by the manufacturer for fixed-distance missions.

- ▶ **200 nm** – (Piston-engine airplanes)
- ▶ **500 nm** – (Piston-engine airplanes)
- ▶ **300 nm** – (Turbine-engine airplanes, except ultra-long range)
- ▶ **600 nm** – (Turbine-engine airplanes, except ultra-long range)
- ▶ **1,000 nm** – (All turbine-engine airplanes)
- ▶ **3,000 nm** – (Ultra-long-range turbine-engine airplanes)
- ▶ **6,000 nm** – (Ultra-long-range turbine-engine airplanes)

Remarks

In this section, *B&CA* generally includes the base price, if it is available or applicable; the certification basis and year; and any notes about estimations, limitations or qualifications regarding specifications, performance or price. All prices are in 2014 dollars, FOB at a U.S. delivery point, unless otherwise noted. The certification basis includes the regulation under which the airplane was originally type certified, the year in which it was originally certified and, if applicable, subsequent years during which the airplane was re-certified.

General

Abbreviations are used throughout the tables: “NA” means not available; “—” indicates the information is not applicable; and “NP” signifies that specific performance is not possible. **B&CA**

	Jets ≥20,000 lb		Jets <20,000 lb		Turboprops >12,500 lb		Turboprops ≤12,500 lb		Single-Engine Turboprops		Multiengine Pistons, Turbocharged		Multiengine Pistons		Single-Engine Pistons, Pressurized		Single-Engine Pistons, Turbocharged		Single-Engine Pistons		
POWERPLANT SYSTEMS																					
Batt temp indicator (nicad only, for each battery)																					
Engine synchronization																					
Fire detection, each engine																					
Fire extinguishing, each engine																					
Propeller, reversible pitch																					
Propellers, synchronized																					
Thrust reversers/attenuators																					
AVIONICS																					
ADF																					
Air data computer																					
Altitude alerter																					
Altitude encoder																					
Antennas, headsets, microphones																					
Audio control panel																					
Automatic flight guidance, 2-axis, alt hold																					
Automatic flight guidance, 3-axis, alt hold																					
DME																					
EFIS																					
ELT																					
Flight director																					
FMS, TSO C115 or GPS, TSO C129 IFR approach																					
Glideslope receiver																					
HSI, slaved (or equivalent EFIS function)																					
Marker beacon receiver																					
Radio altimeter																					
Radiotelephone																					
RMI (or equivalent function on EFIS display)																					
RVSM certification																					
TAWS																					
TCAS I/II (FAR Part 25 airplanes only)																					
Transponder																					
VHF comm, 25-kHz spacing																					
VHF comm, 8.33-kHz spacing																					
VHF nav, 360-channel																					
Weather radar																					
GENERAL																					
Air conditioning, vapor cycle (not required with APU)																					
Anti-skid brakes																					
APU (required for air-start engines, ACM air conditioning)																					
Cabin/cockpit dividers																					
Corrosion-proofing, internal																					
Exterior paint, tinted windows																					
Fire extinguisher, cabin																					
Fire extinguisher, cockpit																					
Fuel tanks, long-range																					
Ground power jack																					
Headrests, air vents, all seats																					
Lavatory																					
Lights, strobe/anti-collision beacon, navigation, landing/taxi																					
Lights, internally lighted instrument, cockpit flood, courtesy																					
Oxygen, supplemental, all seats																					
Refreshment center																					
Seats, crew, articulating																					
Seats, passenger, reclining																					
Shoulder harness, all seats and crew with inertia reel																					
Tables, cabin work																					
ICE AND RAIN PROTECTION																					
Alternate static pressure source (not required with 2 DADC)																					
Approval, flight into known icing																					
Ice protection plates																					
Pitot heat																					
Static wicks																					
Windshield rain removal, mechanical or repellent coating																					
INSTRUMENTATION																					
Angle-of-attack stall margin indicator																					
EGT																					
IVSI (or equivalent EFIS, DADC function)																					
Outside air temperature gauge																					
Primary flight instruments																					

● Required ● Dual required

SINGLE-ENGINE PISTONS NORMALLY ASPIRATED

Manufacturer		Cirrus Design	Piper	Cirrus Design	Mooney	GAS Airvan (Pty) Ltd.	Textron Aviation	
Model		SR20	Arrow PA-28R-201	SR22	Ovation3 M-20R	Airvan GA-8	Beech Bonanza G36 G36	
B&CA Equipped Price		\$349,900	\$462,400	\$489,900	\$649,000	\$726,960	\$777,285	
Characteristics	Seating	1+3/5	1+3/3	1+3/5	1+3/4	1+6/7	1+4/5	
	Wing Loading	21.0	16.2	23.5	19.3	20.7	20.2	
	Power Loading	15.25	13.75	11.61	10.86	13.33	12.17	
	Noise (dBA)	83.4	77.7	83.7	NA	84.9	76.7	
External Dimensions (ft.)	Length	26.0	24.7	26.0	26.9	29.3	27.5	
	Height	8.9	7.9	8.9	8.3	12.8	8.6	
	Span	38.3	35.4	38.3	36.1	40.7	33.5	
Internal Dimensions (ft.)	Length	8.0	7.7	8.0	8.1	11.6	12.6	
	Height	4.1	3.7	4.1	3.7	3.7	4.2	
	Width	4.1	3.5	4.1	3.6	4.2	3.5	
Power	Engine	Cont IO-360-ES	Lyc IO-360-C1C6	Cont IO-550-N	Cont IO-550-G-AP	Lyc IO-540-K1A5	Cont IO-550-B	
	Output (hp)	200	200	310	310	300	300	
	Inspection Interval	2,000t	2,000t	2,000t	2,000t	2,000t	1,900t	
Weights (lb.)	Max Ramp	3,050	2,758	3,600	3,374	4,014	3,663	
	Max Takeoff	3,050	2,750	3,600	3,368	4,000	3,650	
	Max Landing	3,050	2,750	3,600	3,200	4,000	3,650	
	Zero Fuel	2,900c	2,636b	3,400c	3,197b	3,849b	3,494b	
	EOW	2,128	1,798	2,260	2,260	2,241	2,630	
	Max Payload	772	838	1,140	937	1,608	864	
	Useful Load	922	960	1,340	1,114	1,773	1,033	
	Max Baggage	130	200	130	120	180	670	
	Max Fuel	336	432	552	600	540	444	
	Available Payload w/Max Fuel	586	528	788	514	1,233	589	
Limits	Available Fuel w/Max Payload	150	122	200	177	165	169	
	V _{nc}	204	183	205	195	185	203	
	V _{no}	166	146	176	174	143	165	
Airport Performance	V _a	131	118	140	127	121	139	
	TO (SL elev./ISA temp.)	2,221	1,600	1,756	1,620	1,860	1,913	
	TO (5,000' elev.@25C)	3,752	3,250	3,016	2,500	3,670	3,450	
	V _{so}	61	55	64	59	57	59	
	V _x	83	78	88	80	70	84	
Climb	V _r	96	90	108	105	86	100	
	Time to Climb (min.)/Altitude	16/FL 100	16/FL 100	11/FL 100	10/FL 100	15/FL 100	14/FL 100	
Ceiling (ft.)	Initial Gradient (ft./nm)	581	560	775	NA	787	730	
	Service	17,500	16,200	17,500	NA	20,000	18,500	
Cruise	TAS	140	124	160	163	127	160	
	Long Range	Fuel Flow	50	51	68	50	78	71
		Altitude	FL 080	FL 100	FL 080	FL 120	FL 120	FL 080
		Specific Range	2.800	2.431	2.353	3.260	1.628	2.254
	Recommended	TAS	152	130	171	186	135	167
		Fuel Flow	63	68	92	84	88	86
		Altitude	FL 080	FL 090	FL 080	FL 120	FL 080	FL 080
	High Speed	Specific Range	2.413	1.912	1.859	2.214	1.534	1.942
		TAS	159	137	180	196	142	174
		Fuel Flow	70	76	107	114	101	94
Ranges	Altitude	FL 80	FL 060	FL 80	FL 120	FL 060	FL 080	
	Specific Range	2.271	1.803	1.682	1.719	1.406	1.851	
	Seats Full	Nautical Miles	584	537	1,118	1,075	487	242
		Average Speed	140	121	162	161	124	153
		Fuel Used	210	156	492	438	339	126
	Tanks Full	Specific Range/Altitude	2.781/FL 080	3.442/FL 070	2.272/FL 080	2.454/FL 120	1.437/FL 120	1.921/FL 040
		Nautical Miles	764	926	1,118	1,465	690	919
		Average Speed	140	121	162	173	125	151
	Missions (4 occupants)	Fuel Used	275	408	492	558	464	403
		Specific Range/Altitude	2.778/FL 080	2.270/FL 070	2.272/FL 080	2.625/FL 120	1.487/FL 120	2.280/FL 120
200 nm		Runway	1,446	1,600	1,303	1,230	1,860	1,694
		Block Time	1+18	1+29	1+09	1+13	1+38	1+10
		Fuel Used	100	125	127	115	157	132
500 nm		Specific Range/Altitude	2.000/FL 080	1.600/FL 070	1.575/FL 080	1.739/FL 050	1.274/FL 120	1.515/FL 040
		Runway	1,446	1,600	1,519	1,290	1,860	2,054
		Block Time	3+17	3+50	2+49	2+58	3+55	2+54
Remarks		Fuel Used	226	278	305	221	339	304
		Specific Range/Altitude	2.212/FL 080	1.799/FL 090	1.639/FL 080	2.262/FL 100	1.475/FL 120	1.645/FL 060
Suggested Base Price		\$349,900	\$448,750	\$489,900	\$649,000	\$726,960	\$770,385	
Certification Basis		FAR 23, 1999 Includes Garmin Perspective avionics.	CAR 3, 1976/2001 Garmin G500 standard.	FAR 23, 2000 Includes Garmin Perspective avionics; MTOW increased by 200 lb.	CAR 3/FAR 23, 1955/94; STC SA02483CH Includes Garmin G1000 with GFC700 autopilot standard.	FAR 23 A 54 Includes Garmin G500 <i>All data preliminary.</i>	CAR 3, 1956/69/83/2005 Restyled interior; new, lightweight A/C system; Garmin G1000 with SVS.	

SINGLE-ENGINE PISTONS TURBOCHARGED

Manufacturer		Textron Aviation	Cirrus	Textron Aviation	Mooney	GAS Airvan (Pty) Ltd.	Textron Aviation	
Model		Cessna Skylane JT-A CE-1182T	SR22T SR 22	Cessna Turbo Stationair CE-T206H	Acclaim Type S MO-20TN	GAS Airvan TC GA8-320 TC	Cessna Corvalis TT ^X LC41-550-FG	
B&C/A Equipped Price		\$530,000	\$589,900	\$615,000	\$699,000	\$761,030	\$799,000	
Characteristics	Seating	1+3/3	1+3/5	1+5/5	1+3/3	1+6/7	1+3/3	
	Wing Loading	17.8	23.5	20.7	19.2	20.7	25.5	
	Power Loading	13.66	11.43	11.61	12.03	13.13	11.61	
	Noise (dBA)	NA	80.3	75.8	78.0	85.4	81.5	
External Dimensions (ft.)	Length	28.5	26.0	28.3	26.9	28.3	25.2	
	Height	9.3	8.9	9.3	8.3	9.3	9.0	
	Span	36.0	38.3	36.0	36.4	36.0	36.0	
Internal Dimensions (ft.)	Length	7.2	8.0	9.3	8.1	11.6	7.9	
	Height	4.0	4.1	4.1	3.7	3.7	4.1	
	Width	3.5	4.1	3.7	3.6	4.2	4.0	
Power	Engine	SMA SR305-230E-C1	Cont TSIO-550-K	Lyc TIO-540-AJ1A	Cont TSIO-550-G	Lyc TIO-540-AH1A	Cont TSIO-550-C	
	Output (hp)	227	315	310	280	320	310	
	Inspection Interval	NA	2,000t	2,000t	2,000t	1,800t	2,000t	
Weights (lb.)	Max Ramp	3,110	3,609	3,617	3,374	4,214	3,600	
	Max Takeoff	3,100	3,600	3,600	3,368	4,200	3,600	
	Max Landing	2,950	3,600	3,600	3,200	4,000	3,420	
	Zero Fuel	NA	3,400c	3,429b	3,173b	4,053b	3,300c	
	EW	2,092	2,342	2,336	2,378	2,349	2,600	
	Max Payload	NA	1,058	1,093	795	1,704	700	
	Useful Load	1,018	1,267	1,281	996	1,865	1,000	
	Max Baggage	200	130	180	120	180	120	
	Max Fuel	583	552	522	612	540	612	
	Available Payload w/Max Fuel	435	715	759	384	1,325	388	
Available Fuel w/Max Payload	NA	209	188	201	161	300		
Limits	V _{NE}	NA	205	182	195	185	230	
	V _{VO}	NA	176	149	174	143	181	
	V _A	NA	140	125	127	121	158	
Airport Performance	TO (SL elev./ISA Temp.)	1,385	1,517	1,740	2,100	1,840	1,900	
	TO (5,000' elev.@25C)	NA	2,268	2,470	3,100	2,788	2,460	
	V _{SO}	NA	64	57	60	61	61	
	V _X	NA	88	69	80	71	82	
	V _Y	NA	103	89	105	81	110	
Climb	Time to Climb (min./Altitude)	NA/FL 100	7/FL 100	11/FL 100	7/FL 100	13/FL 100	7/FL 100	
	Initial Gradient (ft./nm)	NA	782	724	770	825	701	
Ceilings (ft.)	Certificated	20,000	25,000	25,000	25,000	20,000	25,000	
	Service	20,000	25,000	27,000	25,000	20,000	25,000	
Cruise	Long Range	TAS	NA	171	137	215	125	208
		Fuel Flow	NA	76	85	99	68	78
		Altitude	FL 200	FL 250	FL 240	FL 250	FL 200	FL 250
		Specific Range	NA	2.250	1.612	2.172	1.838	2.667
	Recommended	TAS	NA	201	155	227	130	227
		Fuel Flow	NA	98	99	128	78	130
		Altitude	FL 200	FL 250	FL 240	FL 180	FL 200	FL 250
		Specific Range	NA	2.051	1.566	1.773	1.667	1.746
	High Speed	TAS	156	213	164	242	135	235
		Fuel Flow	NA	110	114	130	98	152
		Altitude	FL 100	FL 250	FL 200	FL 250	FL 200	FL 250
		Specific Range	NA	1.936	1.439	1.862	1.378	1.546
Ranges	Seats Full	Nautical Miles	NA	1,021	200	500	233	450
		Average Speed	NA	171	139	178	125	199
		Fuel Used	NA	486	185	259	220	262
		Specific Range/Altitude	NA/NA	2.101/FL 250	1.081/FL 200	1.931/FL 160	1.059/FL 200	1.718/FL 250
	Tanks Full	Nautical Miles	1,025	1,021	618	1,122	618	1,189
		Average Speed	NA	171	137	200	125	204
		Fuel Used	NA	486	459	539	459	539
		Specific Range/Altitude	NA/FL 140	2.101/FL 250	1.346/FL 240	2.082/FL 250	1.346/FL 200	2.206/FL 250
Missions (4 occupants)	200 nm	Runway	NA	1,405	1,743	1,300	1,743	1,900
		Block Time	NA	1+08	1+25	1+05	1+35	1+05
		Fuel Used	NA	197	170	139	125	150
		Specific Range/Altitude	NA/NA	1.015/FL 100	1.176/FL 120	1.439/FL 120	1.600/FL 120	1.333/FL 120
	500 nm	Runway	NA	1,699	1,743	1,380	1,743	1,900
		Block Time	NA	2+28	3+21	2+54	3+30	2+24
		Fuel Used	NA	360	373	259	373	336
		Specific Range/Altitude	NA/NA	1.389/FL 180	1.340/FL 240	1.931/FL 250	1.340/FL 200	1.488/FL 250
Remarks	Suggested Base Price	\$530,000	\$544,900	\$615,000	\$699,000	\$597,500	\$799,000	
	Certification Basis	FAR 23 pending All data preliminary; Includes Garmin G1000 with GFC700.	FAR 23, 2010 Includes Perspective Global Connect worldwide wx; 200-lb. MTOW increase.	FAR 23, 1998 Includes Garmin G1000 with GFC700 autopilot.	CAR 3, 1955/89/06 Includes Garmin G1000 with GFC700 autopilot standard.	FAR 23, 1998 Includes Garmin G1000 with GFC700 autopilot; All data preliminary.	FAR 23 Includes Garmin G2000 with GFC700 autopilot.	

SINGLE-ENGINE PISTONS PRESSURIZED

Manufacturer		Piper Aircraft	Piper Aircraft	
Model		Malibu Matrix PA-46R-350	Malibu Mirage PA-46-350P	
B&CA Equipped Price		\$1,014,950	\$1,178,875	
Characteristics	Seating	1+4/5	1+4/5	
	Wing Loading	24.8	24.8	
	Power Loading	12.40	12.40	
	Noise (dBA)	81.0	81.0	
External Dimensions (ft.)	Length	28.9	28.9	
	Height	11.3	11.3	
	Span	43.0	43.0	
Internal Dimensions (ft.)	Length	12.4	12.4	
	Height	3.9	3.9	
	Width	4.2	4.2	
Power	Engine	Lyc TIO-540-AE2A	Lyc TIO-540-AE2A	
	Output (hp)	350	350	
	Inspection Interval	2,000t	2,000t	
	Max Ramp	4,358	4,358	
Weights (lb.)	Max Takeoff	4,340	4,340	
	Max Landing	4,123	4,123	
	Zero Fuel	4,123c	4,123c	
	EOW	2,969	3,146	
	Max Payload	1,154	977	
	Useful Load	1,389	1,212	
	Max Baggage	200	200	
	Max Fuel	720	720	
	Available Payload w/Max Fuel	669	492	
	Available Fuel w/Max Payload	235	235	
Limits	Vne	198	198	
	Vno	168	168	
	Va	133	133	
	PSI	5.5	5.5	
	TO (SL elev./ISA temp.)	2,090	2,090	
Airport Performance	TO (5,000' elev.@25C)	2,977	2,977	
	Vso	58	58	
	Vx	81	81	
	Vv	110	110	
	Time to Climb (min.)/Altitude	8/FL 100	8/FL 100	
Climb	Initial Gradient (ft./nm)	703	703	
	Certificated	25,000	25,000	
	Service	25,000	25,000	
Ceilings (ft.)	Sea-Level Cabin	—	12,300	
	TAS	156	156	
Cruise	Long Range	Fuel Flow	66	66
		Altitude	FL 250	FL 250
		Specific Range	2.364	2.364
		TAS	203	203
	Recommended	Fuel Flow	108	108
		Altitude	FL 250	FL 250
		Specific Range	1.880	1.880
		TAS	213	213
	High Speed	Fuel Flow	120	120
		Altitude	FL 250	FL 250
		Specific Range	1.775	1.775
		Nautical Miles	867	535
Ranges	Seats Full	Average Speed	151	138
		Fuel Used	457	312
		Specific Range/Altitude	1.897/FL 200	1.715/FL 120
	Tanks Full	Nautical Miles	1,343	1,343
		Average Speed	158	159
		Fuel Used	658	670
Missions (4 occupants)	200 nm	Runway	2,090	2,090
		Block Time	1+07	1+06
		Fuel Used	168	167
		Specific Range/Altitude	1.190/FL 120	1.198/FL 200
		Runway	2,090	2,090
	500 nm	Block Time	2+31	2+31
		Fuel Used	350	350
		Specific Range/Altitude	1.429/FL 250	1.429/FL 250
		Suggested Base Price	\$939,950	\$1,100,450
		Certification Basis	FAR 23, 1983/88 Garmin G1000 standard; FIKI optional.	FAR 23, 1983/88 Garmin G1000 with SVS and FIKI standard.

MULTIENGINE PISTONS NORMALLY ASPIRATED

Manufacturer		Vulcanair SpA	Vulcanair SpA	
Model		P.68C P 68C	Victor P 68R	
B&CA Equipped Price		\$960,000	\$978,000	
Characteristics	Seating	1+5/6	1+5/6	
	Wing Loading	22.9	21.6	
	Power Loading	11.49	10.80	
	Noise (dBA)	74.7	74.7	
External Dimensions (ft.)	Length	31.3	31.3	
	Height	11.2	11.2	
	Span	39.4	39.4	
Internal Dimensions (ft.)	Length	10.6	10.6	
	Height	3.9	3.9	
	Width	3.8	3.8	
Power	Engines	2 Lyc 10-360-A1B6	2 Lyc 10-360-A1B6	
	Output (hp each)	200	200	
	Inspection Interval	2,000t	2,000t	
	Max Ramp	4,630	4,357	
Weights (lb.)	Max Takeoff	4,594	4,321	
	Max Landing	4,365	4,321	
	Zero Fuel	4,167c	4,147b	
	EOW	3,153	3,197	
	Max Payload	1,014	950	
	Useful Load	1,477	1,160	
	Executive Payload	1,020	1,020	
	Max Fuel	1,063	1,063	
	Payload - Max Fuel	415	98	
	Available Fuel w/Max Payload	463	210	
Limits	Available Fuel w/Executive Payload	457	140	
	Vne	194	193	
	Vno	154	153	
	Va	132	125	
Airport Performance	TO (SL elev./ISA Temp.)	1,312	1,260	
	TO (5,000' elev.@25C)	4,000	4,000	
	A/S (SL elev./ISA)	2,149	2,300	
	A/S (5,000' elev.@25C)	2,854	4,025	
	Vnca	60	60	
	Vbec	70	70	
	Vkse	82	82	
Climb	Vkse	88	88	
	Time to Climb (min.)/Altitude	12/FL 100	12/FL 100	
	Initial Engine-Out Rate (fpm)	217	217	
	Initial All-Engine Gradient (ft./nm)	1,100	920	
	Initial Engine-Out Gradient (ft./nm)	147	147	
Ceilings (ft.)	Certificated	—	—	
	All-Engine Service	18,000	20,000	
	Engine-Out Service	5,000	5,650	
Cruise	Long Range	TAS	144	144
		Fuel Flow	94	94
		Altitude	FL 080	FL 080
		Specific Range	1.532	1.532
	Recommended	TAS	155	155
		Fuel Flow	108	108
		Altitude	FL 080	FL 080
		Specific Range	1.435	1.435
	High Speed	TAS	162	162
		Fuel Flow	116	116
		Altitude	FL 080	FL 080
		Specific Range	1.397	1.397
Ranges	Executive Payload	Nautical Miles	575	575
		Average Speed	145	145
		Trip Fuel	395	395
	Ferry	Specific Range/Altitude	1.456/FL 080	1.456/FL 080
		Nautical Miles	855	855
		Average Speed	145	145
Missions (4 occupants)	200 nm	Trip Fuel	561	561
		Specific Range/Altitude	1.524/FL 080	1.524/FL 080
		Runway	1,450	1,450
		Block Time	1+28	1+28
		Fuel Used	140	140
	500 nm	Specific Range/Altitude	1.429/FL 080	1.429/FL 080
		Runway	1,500	1,500
		Block Time	3+25	3+25
		Fuel Used	375	375
		Specific Range/Altitude	1.333/FL 080	1.333/FL 080
Suggested Base Price	\$960,000	\$978,000		
Certification Basis	FAR 23, 1976/80 Garmin G950; STEC 55X DFCS.	EASA 23, 2009 Garmin G950; STEC 55X DFCS.		

MULTIENGINE PISTONS NORMALLY ASPIRATED

Manufacturer		Textron Aviation	
Model		Beech Baron G58 G58	
B&CA Equipped Price		\$1,394,400	
Characteristics	Seating	1+4/5	
	Wing Loading	27.6	
	Power Loading	9.17	
	Noise (dBA)	77.6	
External Dimensions (ft.)	Length	29.8	
	Height	9.8	
	Span	37.8	
Internal Dimensions (ft.)	Length	12.6	
	Height	4.2	
	Width	3.5	
Power	Engines	2 Cont IO-550-C	
	Output (hp each)	300	
	Inspection Interval	1,900t	
Weights (lb.)	Max Ramp	5,524	
	Max Takeoff	5,500	
	Max Landing	5,400	
	Zero Fuel	5,240b	
	EW	4,030	
	Max Payload	1,210	
	Useful Load	1,494	
	Executive Payload	850	
	Max Fuel	1,164	
	Payload - Max Fuel	330	
Limits	VNE	223	
	VNO	195	
	VA	165	
Airport Performance	TO (SL elev./ISA Temp.)	2,345	
	TO (5,000' elev.@25C)	4,144	
	A/S (SL elev./ISA)	3,009	
	A/S (5,000' elev.@25C)	4,335	
	Vmca	84	
	Vbce	85	
Climb	Time to Climb (min.)/Altitude	10/FL 100	
	Initial Engine-Out Rate (fpm)	390	
	Initial All-Engine Gradient (ft./nm)	988	
	Initial Engine-Out Gradient (ft./nm)	232	
Ceilings (ft.)	Certificated	—	
	All-Engine Service	20,688	
Cruise	Long Range	TAS	185
		Fuel Flow	144
		Altitude	FL 080
	Recommended	Specific Range	1.285
		TAS	192
		Fuel Flow	174
	High Speed	Altitude	FL 080
		Specific Range	1.103
		TAS	200
		Fuel Flow	190
Ranges	Executive Payload	Altitude	FL 080
		Specific Range	1.053
		Nautical Miles	723
	Ferry	Average Speed	180
		Trip Fuel	561
		Specific Range/Altitude	1.289/FL 120
Missions (4 occupants)	200 nm	Nautical Miles	1,480
		Average Speed	180
		Specific Range/Altitude	1.369/FL 120
	500 nm	Runway	2,876
		Block Time	1+03
		Fuel Used	219
Remarks	CAR 3, 1957/69/83/2005 Restyled interior; new, lightweight A/C; Garmin G1000 with SVS.		

MULTIENGINE PISTONS TURBOCHARGED

Manufacturer		Vulcanair SpA		Piper Aircraft	
Model		P 68C-TC		Seneca V PA-34-220T	
B&CA Equipped Price		\$1,015,000		\$1,047,400	
Characteristics	Seating	1+5/5		1+4/5	
	Wing Loading	20.7		22.8	
	Power Loading	10.45		10.80	
	Noise (dBA)	74.7		75.6	
External Dimensions (ft.)	Length	37.6		28.6	
	Height	11.2		9.9	
	Span	39.4		38.9	
Internal Dimensions (ft.)	Length	10.6		10.4	
	Height	3.9		3.6	
	Width	3.8		4.1	
Power	Engines	2 Lyc TIO-360-C1A6D		2 Cont TSIO-360-RB	
	Output (hp each)	210		220	
	Inspection Interval	2,000t		1,800t	
Weights (lb.)	Max Ramp	4,442		4,773	
	Max Takeoff	4,387		4,750	
	Max Landing	4,365		4,513	
	Zero Fuel	4,140b		4,479c	
	EW	2,976		3,491	
	Max Payload	1,164		988	
	Useful Load	1,466		1,331	
	Executive Payload	1,020		850	
	Max Fuel	1,146		732	
	Payload - Max Fuel	320		599	
Limits	VNE	193		204	
	VNO	153		164	
	VA	126		139	
Airport Performance	TO (SL elev./ISA temp.)	1,260		1,707	
	TO (5,000' elev.@25C)	2,200		2,435	
	A/S (SL elev./ISA)	2,300		2,510	
	A/S (5,000' elev.@25C)	3,000		3,117	
	Vmca	63		66	
	Vbce	NA		73	
Climb	Time to Climb (min.)/Altitude	10/FL 100		7/FL 100	
	Initial Engine-Out Rate (fpm)	240		253	
	Initial All-Engine Gradient (ft./nm)	1,400		996	
	Initial Engine-Out Gradient (ft./nm)	NA		173	
Ceilings (ft.)	Certificated	20,000		25,000	
	All-Engine Service	20,000		25,000	
Cruise	Long Range	TAS	144	167	
		Fuel Flow	100	108	
		Altitude	FL 080	FL 230	
	Recommended	Specific Range	1.440	1.546	
		TAS	155	196	
		Fuel Flow	125	144	
	High Speed	Altitude	FL 080	FL 250	
		Specific Range	1.240	1.361	
		TAS	162	200	
		Fuel Flow	150	156	
Ranges	Executive Payload	Altitude	FL 080	FL 230	
		Specific Range	1.080	1.282	
		Nautical Miles	1,050	449	
	Ferry	Average Speed	145	153	
		Trip Fuel	942	348	
		Specific Range/Altitude	1.115/FL 080	1.290/FL 130	
Missions (4 occupants)	200 nm	Nautical Miles	1,100	866	
		Average Speed	145	160	
		Trip Fuel	950	648	
	500 nm	Specific Range/Altitude	1.158/FL 080	1.336/FL 180	
		Runway	NA	1,520	
		Block Time	1+28	1+10	
Remarks	CAR 23, 1982 Data B&CA estimate; Garmin G950 glass cockpit; STEC 55X DFGS.			FAR 23, 1971/80/97 Garmin G1000 with GFC 700 autopilot standard.	

SINGLE-ENGINE TURBOPROPS

Manufacturer		Textron Aviation	Quest Aircraft	Piper Aircraft	Textron Aviation	Socata	Pilatus	
Model		Cessna Caravan CE-208	Kodiak Kodiak 100	Meridian PA-46-500TP	Grand Caravan EX CE-208B	TBM 900 TBM 700 N	PC-12 NG PC-12/47E	
B&CA Equipped Price		\$2,153,715	\$2,170,700	\$2,276,325	\$2,470,415	\$3,711,478	\$4,641,047	
Characteristics	Seating	1+9/13*	1+5/9	1+4/5	1+9/13*	1+5/6	1+7/10	
	Wing Loading	28.6	30.2	27.8	31.5	38.2	37.6	
	Power Loading	11.85	9.67	10.18	10.16	8.70	8.71	
	Noise (dBA)	79.0	84.4	76.8	84.1	76.4	79.3	
External Dimensions (ft.)	Length	37.6	33.8	29.6	41.6	35.2	47.3	
	Height	14.9	15.3	11.3	14.8	14.3	14.0	
	Span	52.1	45.0	43.0	52.1	42.1	53.3	
Internal Dimensions (ft.)	Length	12.7	15.8	12.3	16.7	15.0	16.9	
	Height	4.5	4.8	3.9	4.5	4.1	4.8	
	Width	5.3	4.5	4.1	5.3	4.0	5.0	
Power	Engine	P&WC PT6A-114A	P&WC PT6A-34	P&WC PT6A-42A	P&WC PT6A-140	P&WC PT6A-66D	P&WC PT6A-67P	
	Output (shp)/Flat Rating	675/ISA+31C	750/ISA+7C	500/ISA+55C	867/ISA+24C	850/ISA+49C	1,200/ISA+35C	
	Inspection Interval	3,600t	4,000t	3,600t	3,600t	3,500t	3,500t	
Weights (lb.)	Max Ramp	8,035	7,305	5,134	8,842	7,430	10,495	
	Max Takeoff	8,000	7,255	5,092	8,807	7,394	10,450	
	Max Landing	7,800	7,255	4,850	8,500	7,024	9,921	
	Zero Fuel	7,432b	6,490c	4,850c	8,150b	6,032c	9,039c	
	BOW	4,925	4,428	3,644	5,305	4,829	6,782	
	Max Payload	2,507	2,062	1,206	2,845	1,203	2,257	
	Useful Load	3,110	2,877	1,490	3,537	2,601	3,713	
	Executive Payload	1,800	1,000	800	1,800	850	1,400	
	Max Fuel	2,224	2,144	1,140	2,246	2,017	2,704	
	Available Payload w/Max Fuel	886	733	350	1,291	653	1,009	
	Available Fuel w/Max Payload	604	815	284	692	1,398	1,456	
Available Fuel w/Executive Payload	1,310	1,877	690	1,737	1,751	2,313		
Limits	V _{wo}	175	180	188	175	266	240	
	V _a	150	143	127	148	160	167	
	PSI	—	—	5.5	—	6.2	5.8	
Airport Performance	TO (SL elev./ISA temp.)	2,055	1,468	2,438	2,160	2,380	2,650	
	TO (5,000' elev.@25C)	2,973	2,396	3,691	3,661	3,475	4,450	
	V _{so}	61	60	69	61	65	67	
	V _x	90	73	95	86	100	120	
	V _r	107	101	125	108	124	130	
Climb	Time to Climb (min.)/Altitude	9/FL 100	9/FL 100	19/FL 250	9/FL 100	13/FL 250	21/FL 250	
	Initial Gradient (ft./nm)	771	915	753	816	1,000	833	
Ceilings (ft.)	Certificated	25,000	25,000	30,000	25,000	31,000	30,000	
	Service	25,000	25,000	30,000	25,000	31,000	30,000	
	Sea-Level Cabin	—	—	12,300	—	14,390	13,100	
Cruise	Long Range	TAS	157	139	179	163	252	203
		Fuel Flow	281	229	135	324	241	245
		Altitude	FL 100	FL 100	FL 280	FL 100	FL 310	FL 300
	High Speed	Specific Range	0.559	0.607	1.326	0.503	0.956	0.829
		TAS	186	171	257	195	330	280
		Fuel Flow	379	326	241	438	412	491
NBAA IFR Ranges (100-nm alternate)	Executive Payload (w/available fuel)	Altitude	FL 100	FL 100	FL 280	FL 100	FL 290	FL 200
		Specific Range	0.491	0.525	1.066	0.445	0.801	0.570
		Nautical Miles	455	1,079	699	599	1,150	1,458
		Average Speed	155	139	180	161	325	257
	Max Fuel (w/available payload)	Trip Fuel	876	1,907	649	1,255	1,370	2,073
		Specific Range/Altitude	0.519/FL 100	0.566/FL 100	1.077/FL 280	0.477/FL 100	0.839/FL 310	0.703/FL 300
		Nautical Miles	965	1,079	953	857	1,514	1,606
		Average Speed	156	139	180	162	252	258
	Ferry	Trip Fuel	1,795	1,907	841	1,768	1,599	2,266
		Specific Range/Altitude	0.538/FL 100	0.566/FL 100	1.133/FL 280	0.485/FL 100	0.947/FL 310	0.709/FL 300
		Nautical Miles	970	1,181	1,072	865	1,594	1,644
Missions (4 passengers)	300 nm	Average Speed	156	142	220	162	252	264
		Trip Fuel	1,800	1,907	978	1,777	1,598	2,277
		Specific Range/Altitude	0.539/FL 100	0.619/FL 160	1.096/FL 280	0.487/FL 100	0.997/FL 310	0.722/FL 300
		Runway	1,468	937	2,250	1,345	1,765	1,650
	600 nm	Flight Time	1+40	1+49	1+22	1+37	1+00	1+10
		Fuel Used	648	583	379	713	440	543
		Specific Range/Altitude	0.463/FL 100	0.515/FL 100	0.792/FL 280	0.421/FL 100	0.682/FL 280	0.552/FL 260
		Runway	1,675	975	2,400	1,659	2,005	1,850
	1,000 nm	Flight Time	3+17	3+38	2+32	3+09	1+55	2+18
		Fuel Used	1,260	1,166	661	1,392	830	969
		Specific Range/Altitude	0.476/FL 100	0.515/FL 100	0.908/FL 280	0.431/FL 100	0.723/FL 280	0.619/FL 270
Runway		NP	1,467	2,438	NP	2,380	2,100	
Remarks	Flight Time	NP	5+54	4+34	NP	3+10	3+48	
	Fuel Used	NP	1,907	920	NP	1,320	1,509	
	Specific Range/Altitude	NP/NP	0.524/FL 100	1.087/FL 280	NP/NP	0.758/FL 290	0.663/FL 280	
Suggested Base Price		\$1,899,000	\$1,975,000	\$2,219,850	\$2,199,000	\$3,512,088	\$3,850,000	
Certification Basis		FAR 23, 1984/98 *Export only; Garmin G1000 with GFC700 autopilot.	FAR 23, 2007 Normal category; includes Garmin G1000.	FAR 23 A 52 *1,000-nm, 3-passenger mission; Garmin G1000 with SVS.	FAR 23, 1986/2012 *Export only; Garmin G1000 with GFC700 autopilot.	FAR 23, 1990/2003/ 06/07/14 Pilot door std.; 5-blade prop; multi-seat; G1000; RVSM; SVT; sat phone/WX; 5-yr. system warranty.	FAR 23, 1996/2005/08 Honeywell Primus APEX; SmartView; BMW Designworks interior.	

MULTIENGINE TURBOPROPS 12,500-LB. MTOW OR LESS

Manufacturer		Evektor	Vulcanair SpA	Textron Aviation	GECI Aviation	Textron Aviation	
Model		Outback EV-55	Viator AP68TP-600	King Air C90GTx C90GTi	Caravan II F406	King Air 250 B200GT	
B&CA Equipped Price		\$2,250,000	\$2,772,000	\$3,891,200	\$4,250,000	\$6,105,425	
Characteristics	Seating	1+9/14	1+7/10	1+7/8	1+8/13	1+8/10	
	Wing Loading	37.4	31.4	34.4	38.9	40.3	
	Power Loading	9.46	9.58	9.53	9.85	7.35	
	Noise (dBA)	NA	71.7	76.0	69.9	81.2	
External Dimensions (ft.)	Length	46.6	37.0	35.5	39.1	43.8	
	Height	16.8	11.9	14.3	13.2	14.8	
	Span	53.2	39.4	53.7	49.5	57.9	
Internal Dimensions (ft.)	Length: OA/Net	20/16.5	17.2/11.9	12.4/12.4	14.2/12.8	16.7/16.7	
	Height	4.5	4.1	4.8	4.3	4.8	
	Width: Max/Floor	5.3/4.7	3.7/3.7	4.5/4.1	4.7/4.7	4.5/4.1	
Power	Engines	2 P&WC PT6A-21	2 RR 250 B17C	2 P&WC PT6A-135A	2 P&WC PT6A-112	2 P&WC PT6A-52	
	Output (shp each)/Flat Rating	536/ISA+15C	328/ISA+25C	550/ISA+30C	500/ISA+22C	850/ISA+37C	
	Inspection Interval	3,600t	3,500t	3,600t	3,600t	3,600t	
Weights (lb.)	Max Ramp	10,207	6,338	10,545	9,925	12,590	
	Max Takeoff	10,141	6,283	10,485	9,850	12,500	
	Max Landing	10,141	6,283	9,832	9,360	12,500	
	Zero Fuel	9,810c	5,621c	9,378c	8,500c	11,000c	
	BOW	5,965	3,770	7,250	5,732	8,790	
	Max Payload	3,845	1,851	2,128	2,768	2,210	
	Useful Load	4,242	2,568	3,295	4,193	3,800	
	Executive Payload	1,800	1,400	1,400	1,600	1,600	
	Max Fuel	3,413	1,487	2,573	3,183	3,645	
	Available Payload w/Max Fuel	829	1,081	722	1,010	155	
	Available Fuel w/Max Payload	397	717	1,167	1,425	1,590	
	Available Fuel w/Executive Payload	2,442	1,168	1,895	2,593	2,200	
Limits	V _{MO}	205	200	226	213	260	
	V _A	140	157	169	160	182	
	PSI	—	—	5.0	—	6.5	
Airport Performance	TO (SL elev./ISA temp.)	1,378	2,034	2,552	2,964	2,111	
	TO (5,000' elev.@25C)	1,837	2,950	3,648	4,106	3,099	
	A/S (SL elev./ISA temp.)	1,722	2,887	3,666	4,746	3,687	
	A/S (5,000' elev.@25C)	2,395	3,740	4,779	6,215	4,859	
	V _{MC} A	66	77	80	90	86	
	V _{LO} C	79	85	97	101	94	
	V _X SE	92	90	100	105	115	
	V _X SE	95	105	108	115	121	
Climb	Time to Climb (min.)/Altitude	6/FL 010	7/FL 100	17/FL 250	6/FL 100	13/FL 250	
	Initial Engine-Out Rate (fpm)	290	270	474	310	682	
	Initial All-Engine Gradient (ft./nm)	1,107	1,500	1,953	910	1,170	
	Initial Engine-Out Gradient (ft./nm)	219	180	259	170	364	
Ceilings (ft.)	Certificated	24,000	25,000	30,000	30,000	35,000	
	All-Engine Service	24,000	25,000	30,000	30,000	35,000	
	Engine-Out Service	15,420	11,400	19,170	14,550	26,000	
	Sea-Level Cabin	—	—	11,065	—	15,293	
Cruise	Long Range	TAS	180	169	208	184	256
		Fuel Flow	432	261	332	412	430
		Altitude	FL 010	FL 100	FL 260	FL 100	FL 350
		Specific Range	0.417	0.648	0.627	0.447	0.595
	High Speed	TAS	220	214	270	234	310
		Fuel Flow	610	375	612	605	750
		Altitude	FL 200	FL 100	FL 200	FL 100	FL 260
		Specific Range	0.361	0.571	0.441	0.387	0.413
NBAA IFR Ranges (100-nm alternate)	Max Payload (w/available fuel)	Nautical Miles	NP	543	275	427	332
		Average Speed	NP	180	226	179	267
		Trip Fuel	NP	781	648	1,009	866
		Specific Range/Altitude	NP/NP	0.695/FL 100	0.424/FL 270	0.423/FL 100	0.383/FL 330
	Max Fuel (w/available payload)	Nautical Miles	1,046	837	1,040	1,188	1,413
		Average Speed	217	179	252	180	291
		Trip Fuel	3,008	1,220	2,069	2,767	2,961
		Specific Range/Altitude	0.348/FL 100	0.686/FL 100	0.503/FL 270	0.429/FL 100	0.477/FL 330
	Full Fuel (w/4 passengers)	Nautical Miles	1,046	837	997	1,201	1,070
		Average Speed	217	179	251	180	288
		Trip Fuel	3,008	1,220	1,990	2,770	2,286
		Specific Range/Altitude	0.348/FL 100	0.686/FL 100	0.501/FL 270	0.434/FL 100	0.468/FL 330
Ferry	Nautical Miles	1,051	837	1,059	1,228	1,430	
	Average Speed	218	179	255	176	293	
	Trip Fuel	3,008	1,220	2,077	2,787	2,962	
	Specific Range/Altitude	0.349/FL 100	0.686/FL 100	0.510/FL 260	0.441/FL 100	0.483/FL 330	
Missions (4 passengers)	300 nm	Runway	3,163	1,247	3,168	3,815	3,496
		Flight Time	1+26	1+35	1+14	1+21	1+03
		Fuel Used	943	419	747	807	868
		Specific Range/Altitude	0.318/FL 100	0.716/FL 100	0.402/FL 210	0.372/FL 100	0.346/FL 250
	600 nm	Runway	1,289	1,558	3,369	4,075	3,579
		Flight Time	2+22	3+18	2+22	2+39	2+03
		Fuel Used	1,773	866	1,351	1,609	1,493
		Specific Range/Altitude	0.338/FL 100	0.693/FL 100	0.444/FL 230	0.373/FL 100	0.402/FL 290
	1,000 nm	Runway	1,565	NP	3,662	NP	3,668
		Flight Time	4+36	NP	3+56	NP	3+28
		Fuel Used	2,881	NP	1,996	NP	2,146
		Specific Range/Altitude	0.347/FL 100	NP/NP	0.501/FL 270	NP/NP	0.466/FL 330
Suggested Base Price		NA	\$2,772,000	\$3,870,700	NA	\$6,084,925	
Remarks		EASA/FAR 23 pending CMC SmartDeck.	FAR 23, 1986 B&CA computed data; G950; STEC 2100.	CAR 3, 1959/2007 Pro Line 21; STC wt. inc.; STC winglets.	SFAR 41C, 1986	FAR 23, 1973/80/2008/11 STC SA02131SE.	

MULTIENGINE TURBOPROPS >12,500-LB. MTOW

Manufacturer		Piaggio Aero Industries		Textron Aviation		Textron Aviation		Beechcraft Corporation		
Model		Avanti II P180		Beechcraft King Air 350HW B300		Beechcraft King Air 350i B300		Beechcraft King Air 350iER B300ER		
B&CA Equipped Price		\$7,195,000		\$7,330,255		\$7,421,825		\$8,462,225		
Characteristics	Seating	1+7/9		1+9/14		1+9/11		1+9/11		
	Wing Loading	70.3		53.2		48.4		53.2		
	Power Loading	7.12		7.86		7.14		7.86		
	Noise (dBA)	75.0		81.5		72.1		81.5		
External Dimensions (ft.)	Length	47.3		46.7		46.7		46.7		
	Height	13.0		14.3		14.3		14.3		
	Span	46.0		57.9		57.9		57.9		
Internal Dimensions (ft.)	Length: OA/Net	17.5/17.5		19.5/19.5		19.5/19.5		19.5/19.5		
	Height	5.8		4.8		4.8		4.8		
	Width: Max/Floor	6.1/3.5		4.5/4.1		4.5/4.1		4.5/4.1		
Power	Engines	2 P&WC PT6A-66B		2 P&WC PT6A-60A		2 P&WC PT6A-60A		2 P&WC PT6A-60A		
	Output (shp each)/Flat Rating	850/ISA+28C		1,050/ISA+10C		1,050/ISA+10C		1,050/ISA+10C		
	Inspection Interval	3,600t		3,600t		3,600t		3,600t		
Weights (lb.)	Max Ramp	12,150		16,600		15,100		16,600		
	Max Takeoff	12,100		16,500		15,000		16,500		
	Max Landing	11,500		15,675		15,000		15,675		
	Zero Fuel	9,800c		13,000c		12,500c		13,000c		
	BOW	8,375		9,340		10,070		10,330		
	Max Payload	1,425		3,660		2,430		2,670		
	Useful Load	3,775		7,260		5,030		6,270		
	Executive Payload	1,400		1,800		1,800		1,800		
	Max Fuel	2,802		3,611		3,611		5,192		
	Available Payload w/Max Fuel	973		3,649		1,419		1,078		
Limits	Available Fuel w/Max Payload	2,350		3,600		2,600		3,600		
	Available Fuel w/Executive Payload	2,375		3,611		3,230		4,470		
	M _{mo}	260		0.58		0.58		0.58		
	Trans. Alt. FL	202		FL 240		FL 210		FL 240		
	V _{mo}	9.0		245		263		245		
	V _a	3,262		182		182		182		
Airport Performance	PSI	4,700		6.5		6.5		6.5		
	TO (SL elev./ISA temp.)	5,750		4,598		3,300		4,473		
	TOFL (5,000' elev.@25C)	7,400		6,003		5,376		7,588		
	Hot/High WAT Limit	100		14,491		14,416		15,830		
	NBAA IFR Range	106		1,403		1,548		2,080		
	V ₂	132		111		109		111		
Climb	V _{REF}	140		104		100		104		
	Landing Distance	10/FL 250		2,720		2,390		2,728		
	Time to Climb (min.)/Altitude	670		23/FL 250		15/FL 250		18/FL 250		
	*FAR 25 Initial Engine-Out Rate (fpm)	1,106		274		552		337		
	FAR 25 Initial Engine-Out Gradient (ft./nm)	287		172		304		182		
	Certificated	41,000		35,000		35,000		35,000		
Ceilings (ft.)	All-Engine Service	39,400		35,000		35,000		35,000		
	Engine-Out Service	23,800		17,100		21,500		17,100		
	Sea-Level Cabin	24,000		15,293		15,293		15,293		
	Cruise	TAS	318		232		235		238	
		Fuel Flow	408		392		362		402	
		Altitude	FL 410		FL 330		FL 330		FL 330	
NBAA IFR Ranges (100-nm alternate)	Specific Range	0.779		0.592		0.649		0.592		
	TAS	400		303		312		303		
	Fuel Flow	792		766		773		764		
	Altitude	FL 310		FL 240		FL 240		FL 240		
	Specific Range	0.505		0.396		0.404		0.397		
	Nautical Miles	1,070		1,255		899		1,336		
Missions (4 passengers)	Average Speed	315		258		274		261		
	Trip Fuel	1,715		2,840		1,897		2,886		
	Specific Range/Altitude	0.624/FL 390		0.442/FL 350		0.474/FL 350		0.463/FL 350		
	Nautical Miles	1,450		1,261		1,489		2,239		
	Average Speed	311		258		280		268		
	Trip Fuel	2,167		2,886		2,951		4,528		
	Specific Range/Altitude	0.669/FL 410		0.437/FL 350		0.505/FL 350		0.494/FL 350		
	Nautical Miles	1,510		1,395		1,532		2,278		
	Average Speed	317		269		284		270		
	Trip Fuel	2,167		2,908		2,956		4,531		
Remarks	Specific Range/Altitude	0.697/FL 410		0.480/FL 350		0.518/FL 350		0.503/FL 350		
	Nautical Miles	1,530		1,429		1,560		2,344		
	Average Speed	318		276		288		274		
	Trip Fuel	2,167		2,920		2,962		4,539		
	Specific Range/Altitude	0.706/FL 410		0.489/FL 350		0.527/FL 350		0.516/FL 350		
	Runway	2,350		3,432		2,608		3,451		
	Flight Time	0+53		1+07		1+02		1+05		
	Fuel Used	688		967		883		908		
	Specific Range/Altitude	0.436/FL 310		0.310/FL 250		0.340/FL 250		0.330/FL 250		
	Runway	2,550		3,568		2,724		3,584		
300 nm	Flight Time	1+44		2+10		2+02		2+07		
	Fuel Used	1,144		1,581		1,472		1,510		
	Specific Range/Altitude	0.524/FL 350		0.380/FL 290		0.408/FL 290		0.397/FL 290		
	Runway	2,700		3,720		2,851		3,732		
	Flight Time	3+02		3+39		3+27		3+36		
	Fuel Used	1,603		2,262		2,106		2,174		
600 nm	Specific Range/Altitude	0.624/FL 390		0.442/FL 330		0.475/FL 330		0.460/FL 330		
	Suggested Base Price	\$7,195,000		\$7,484,525		\$7,384,125		\$8,424,525		
1,000 nm	FAR 23, 1990 Certification Basis	FAR 23, 1990 Includes Pro Line 21 avionics; TCAS I, Iridium satcom; RVSM approved.		FAR 23, 1989/2007 Commuter category; Installation by HBS; Slick Interior available for Special Missions; RVSM approved.		FAR 23, 1989 Commuter category; Pro Line 21; new interior with Rockwell Collins Venue CMS; RVSM approved.		FAR 23, 1989/07 Commuter category; Pro Line 21; new interior with Rockwell Collins Venue CMS; RVSM approved.		

JETS LESS THAN 10,000-LB. MTOW

Manufacturer		Textron Aviation	
Model		Citation Mustang CE-510	
B&CA Equipped Price		\$3,465,000	
Characteristics	Seating	1+5/5	
	Wing Loading	41.2	
Noise (EPNdB): TO/Sideline/APR	Power Loading	2.96	
		73.9/85.0/86.0	
External Dimensions (ft.)	Length	40.6	
	Height	13.4	
	Span	43.2	
Internal Dimensions (ft.)	Length: OA/Net	9.8/9.8	
	Height	4.5	
Baggage	Width: Max/Floor	4.6/3.1	
	Internal: Cu. ft./lb.	6/98	
Power	External: Cu. ft./lb.	57/620	
	Engine(s)	2 P&WC PW615F	
Weights (lb.)	Output (lb. each)/Flat Rating	1,460/ISA+10C	
	Inspection Interval	3,500t	
	Max Ramp	8,730	
	Max Takeoff	8,645	
	Max Landing	8,000	
	Zero Fuel	6,750c	
	BOW	5,595	
	Max Payload	1,155	
	Useful Load	3,135	
	Executive Payload	1,000	
Limits	Max Fuel	2,580	
	Available Payload w/Max Fuel	555	
	Available Fuel w/Max Payload	1,980	
	Available Fuel w/Executive Payload	2,135	
	Mmo	0.630	
	Trans. Alt. FL/Vmo	FL 271/250	
Airport Performance	PSI	8.3	
	TOFL (SL elev./ISA temp.)	3,110	
	TOFL (5,000' elev.@25C)	6,600	
	Hot/High Weight Limit	8,645	
	NBAA IFR Range	988	
	V2@SL ISA, MTOW	97	
Climb	Vref w/4 Pax, NBAA IFR Res.	88	
	Landing Distance w/4 Pax, NBAA IFR Res.	2,139	
	Time to Climb/Altitude	20/FL 370	
Ceilings (ft.)	FAR 25 Engine-Out Rate (fpm)	432	
	FAR 25 Engine-Out Gradient (ft./nm)	267	
	Certificated	41,000	
	All-Engine Service	41,000	
Cruise	Engine-Out Service	26,900	
	Sea-Level Cabin	21,280	
	TAS	319	
	Fuel Flow	499	
NBAA IFR Ranges (100-nm alternate)	Altitude	FL 390	
	Specific Range	0.639	
	TAS	339	
	Fuel Flow	609	
	Altitude	FL 350	
	Specific Range	0.557	
	Nautical Miles	716	
	Average Speed	294	
	Trip Fuel	1,300	
	Specific Range/Altitude	0.551/FL 410	
Missions (4 passengers)	Nautical Miles	1,159	
	Average Speed	305	
	Trip Fuel	1,948	
	Specific Range/Altitude	0.595/FL 410	
Remarks	Nautical Miles	967	
	Average Speed	301	
	Trip Fuel	1,669	
	Specific Range/Altitude	0.579/FL 410	
300 nm	Nautical Miles	1,205	
	Average Speed	316	
	Trip Fuel	1,965	
	Specific Range/Altitude	0.613/FL 410	
600 nm	Runway	2,496	
	Flight Time	1+00	
	Fuel Used	670	
	Specific Range/Altitude	0.448/FL 370	
1,000 nm	Runway	2,695	
	Flight Time	1+56	
	Fuel Used	1,134	
	Specific Range/Altitude	0.529/FL 390	
Remarks	Runway	3,109	
	Flight Time	3+19	
	Fuel Used	1,717	
	Specific Range/Altitude	0.582/FL 410	
Remarks	Certification Basis	FAR 23, 2006 1,000-nm mission flown with 753-lb. payload.	

JETS LESS THAN 20,000-LB. MTOW

Manufacturer		Embraer		Honda Aircraft Co.	
Model		Phenom 100E EMB-500		HondaJet HA-420	
B&CA Equipped Price		\$4,161,000		\$4,500,000	
Characteristics	Seating	1+5/7		1+5/6	
	Wing Loading	52.5		NA	
Noise (EPNdB): TO/Sideline/APR	Power Loading	3.12		NA	
		70.4/81.4/86.1		NA/NA/NA	
External Dimensions (ft.)	Length	42.1		42.6	
	Height	14.3		14.9	
	Span	40.4		39.8	
Internal Dimensions (ft.)	Length: OA/Net	11.0/11.0		12.1/12.1	
	Height	4.8		4.8	
Baggage	Width: Max/Floor	5.1/3.6		5.0/NA	
	Internal: Cu. ft./lb.	10/99		NA/NA	
Power	External: Cu. ft./lb.	60/418		66/NA	
	Engines	2 P&WC PW 617F-E		2 GE Honda HF-120	
Weights (lb.)	Output (lb. each)/Flat Rating	1,695/ISA+10C		2,050/NA	
	Inspection Interval	3,500t		NA	
	Max Ramp	10,626		NA	
	Max Takeoff	10,582		NA	
	Max Landing	9,877		NA	
	Zero Fuel	8,554c		NA	
	BOW	7,220		NA	
	Max Payload	1,334		NA	
	Useful Load	3,406		NA	
	Executive Payload	1,000		NA	
Limits	Max Fuel	2,804		NA	
	Available Payload w/Max Fuel	602		NA	
	Available Fuel w/Max Payload	2,072		NA	
	Available Fuel w/Executive Payload	2,406		NA	
	Mmo	0.700		0.720	
	Trans. Alt. FL/Vmo	280/275		FL 300/NA	
Airport Performance	PSI	8.3		8.7	
	TOFL (SL elev./ISA temp.)	3,123		NA	
	TOFL (5,000' elev.@25C)	6,609		NA	
	Hot/High Weight Limit	10,582		NA	
	NBAA IFR Range	1,071		NA	
	V2@SL ISA, MTOW	98		NA	
Climb	Vref w/4 Pax, NBAA IFR Res.	94		NA	
	Landing Distance w/4 Pax, NBAA IFR Res.	2,466		NA	
	Time to Climb/Altitude	24/FL 370		NA/NA	
Ceilings (ft.)	FAR 25 Engine-Out Rate (fpm)	560		NA	
	FAR 25 Engine-Out Gradient (ft./nm)	298		NA	
	Certificated	41,000		43,000	
	All-Engine Service	41,000		43,000	
Cruise	Engine-Out Service	24,045		NA	
	Sea-Level Cabin	21,280		NA	
	TAS	332		NA	
	Fuel Flow	525		NA	
NBAA IFR Ranges (FAR Part 23, 100-nm alternate; FAR Part 25, 200-nm alternate)	Altitude	FL 410		NA	
	Specific Range	0.632		NA	
	TAS	389		420	
	Fuel Flow	851		NA	
	Altitude	FL 330		FL 300	
	Specific Range	0.457		NA	
	Nautical Miles	701		NA	
	Average Speed	319		NA	
	Trip Fuel	1,411		NA	
	Specific Range/Altitude	0.497/FL 410		NA/NA	
Missions (4 passengers)	Nautical Miles	1,181		1,180	
	Average Speed	326		NA	
	Trip Fuel	2,163		NA	
	Specific Range/Altitude	0.546/FL 410		NA/NA	
300 nm	Nautical Miles	1,050		NA	
	Average Speed	324		NA	
	Trip Fuel	1,960		NA	
	Specific Range/Altitude	0.536/FL 410		NA/NA	
600 nm	Nautical Miles	1,234		NA	
	Average Speed	325		NA	
	Trip Fuel	2,183		NA	
	Specific Range/Altitude	0.565/FL 410		NA/NA	
1,000 nm	Runway	2,722		NA	
	Flight Time	0+55		NA	
	Fuel Used	741		NA	
	Specific Range/Altitude	0.405/FL 390		NA/NA	
Remarks	Runway	2,860		NA	
	Flight Time	1+46		NA	
	Fuel Used	1,263		NA	
	Specific Range/Altitude	0.475/FL 390		NA/NA	
Remarks	Runway	3,050		NA	
	Flight Time	3+05		NA	
	Fuel Used	1,874		NA	
	Specific Range/Altitude	0.534/FL 410		NA/NA	
Remarks	Certification Basis	FAR 23, 2008		FAR 23 pending All data preliminary.	

JETS LESS THAN 20,000-LB. MTOW

Manufacturer		Textron Aviation	Syberjet	Textron Aviation	Textron Aviation	Embraer	Textron Aviation
Model		Cessna Citation M2 CE-525	SJ30-2	Citation CJ2+ CE-525A	Citation CJ3+ CE-525B	Phenom 300 EMB-505	Citation CJ4 CE-525C
B&CA Equipped Price		\$4,655,000	\$7,250,000	\$7,270,000	\$8,435,000	\$8,955,000	\$9,395,000
Characteristics	Seating	1+7/7	1+5/6	1+8/9	1+8/9	1+7/10	2+8/9
	Wing Loading	44.6	73.2	47.4	47.2	58.6	51.8
	Power Loading	2.72	3.03	2.51	2.46	2.67	2.36
	Noise (EPNdB): 10/Sideline/APR	73.2/85.9/88.5	78.5/86.2/91.8	75.5/86.1/89.7	74.0/88.7/88.6	69.9/88.8/88.5	75.4/92.8/89.5
External Dimensions (ft.)	Length	42.6	46.8	47.7	51.2	51.2	53.3
	Height	13.9	14.2	14.0	15.2	16.7	15.3
	Span	47.3	42.3	49.8	53.3	52.2	50.8
Internal Dimensions (ft.)	Length: OA/Net	11.0/11.0	12.5/12.5	13.6/13.6	15.7/15.7	17.2/17.2	17.3/17.3
	Height	4.8	4.4	4.8	4.8	4.9	4.8
	Width: Max/Floor	4.8/3.1	4.8/2.8	4.8/3.1	4.8/3.1	5.1/3.6	4.8/3.3
Baggage	Internal: Cu. ft./lb.	—/—	6/100	—/—	—/—	10/77	6/40
	External: Cu. ft./lb.	46/725	53/500	65/1,000	65/1,000	74/573	71/1,000
Power	Engines	2 Wms Intl FJ44-1AP-21	2 Wms Intl FJ44-2A	2 Wms Intl FJ44-3A-24	2 Wms Intl FJ44-3A	2 P&WC PW 535E	2 Wms Intl FJ44-4A
	Output (lb. each)/Flat Rating	1,965/ISA+7C	2,300/ISA+8C	2,490/ISA+7C	2,820/ISA+11C	3,360/ISA+15C	3,621/ISA+11C
	Inspection Interval	3,500t	3,500t	4,000t	4,000t	5,000t	5,000t
Weights (lb.)	Max Ramp	10,800	14,050	12,625	14,070	18,078	17,230
	Max Takeoff	10,700	13,950	12,500	13,870	17,968	17,110
	Max Landing	9,900	12,725	11,525	12,750	16,865	15,660
	Zero Fuel	8,400c	10,500c	9,700c	10,510c	13,999c	12,500c
	BOW	7,000	8,917	8,030	8,580	11,583	10,460
	Max Payload	1,400	1,583	1,670	1,930	2,416	2,040
	Useful Load	3,800	5,133	4,595	5,490	6,495	6,770
	Executive Payload	1,400	1,000	1,600	1,600	1,400	1,600
	Max Fuel	3,309	4,850	3,930	4,710	5,353	5,828
	Available Payload w/Max Fuel	491	283	665	780	1,142	942
	Available Fuel w/Max Payload	2,400	3,550	2,925	3,560	4,079	4,730
	Available Fuel w/Executive Payload	2,400	4,133	2,995	3,890	5,095	5,170
	Limits	Mwo	0.710	0.830	0.737	0.737	0.780
Trans. Alt. FL/Vmo		FL 305/263	FL 295/320	FL 291/278	FL 293/278	FL 263/320	FL 279/305
PSI		8.5	12.0	8.9	8.9	9.4	9.0
Airport Performance	TOFL (SL elev./ISA temp.)	3,210	3,939	3,360	3,180	3,138	3,190
	TOFL (5,000' elev.@25C)	5,580	8,784	5,180	4,750	5,114	5,021
	Hot/High Weight Limit	10,700	13,125	12,500	13,870	17,968	16,968
	NBAA IFR Range	1,198	1,915	1,531	1,715	2,019	1,942
	Vz@SL ISA, MTOW	111	112	116	114	112	117
	Vnet w/4 Pax, NBAA IFR Res.	101	104	102	99	104	99
	Landing Distance w/4 Pax, NBAA IFR Res.	2,340	2,657	2,658	2,424	2,220	2,281
Climb	Time to Climb/Altitude	18/FL 370	16/FL 370	15/FL 370	15/FL 370	14/FL 370	14/FL 370
	FAR 25 Engine-Out Rate (fpm)	618	312	611	808	911	839
	FAR 25 Engine-Out Gradient (ft./nm)	334	167	316	425	462	430
Ceilings (ft.)	Certificated	41,000	49,000	45,000	45,000	45,000	45,000
	All-Engine Service	41,000	44,000	45,000	45,000	45,000	45,000
	Engine-Out Service	26,800	25,800	23,800	26,250	30,137	28,200
	Sea-Level Cabin	22,027	41,000	23,586	23,586	25,560	23,984
Cruise	Long Range	TAS	323	436	357	383	377
		Fuel Flow	516	684	591	624	757
		Altitude	FL 410	FL 450	FL 450	FL 450	FL 450
	High Speed	Specific Range	0.626	0.637	0.604	0.564	0.506
		TAS	401	475	413	415	444
		Fuel Flow	920	1,188	1,096	1,197	1,312
NBAA IFR Ranges (FAR Part 23, 100-nm alternate; FAR Part 25, 200-nm alternate)	Max Payload (w/available fuel)	Altitude	FL 350	FL 360	FL 350	FL 350	FL 370
		Specific Range	0.436	0.400	0.377	0.347	0.338
		Nautical Miles	812	1,635	993	1,172	1,425
		Average Speed	361	402	368	368	397
	Max Fuel (w/available payload)	Trip Fuel	1,706	2,908	2,071	2,552	3,109
		Specific Range/Altitude	0.476/FL 410	0.562/FL 470	0.479/FL 450	0.459/FL 450	0.401/FL 450
		Nautical Miles	1,369	2,598	1,610	1,869	1,877
		Average Speed	373	410	379	378	409
	Four Passengers (w/available fuel)	Trip Fuel	2,676	4,241	3,152	3,850	4,416
		Specific Range/Altitude	0.512/FL 410	0.613/FL 490	0.511/FL 450	0.485/FL 450	0.425/FL 450
		Nautical Miles	1,177	2,205	1,509	1,691	1,903
		Average Speed	370	408	377	376	411
	Ferry	Trip Fuel	2,342	3,713	2,975	3,518	4,447
Specific Range/Altitude		0.503/FL 410	0.594/FL 490	0.507/FL 450	0.481/FL 450	0.428/FL 450	
Nautical Miles		1,398	2,667	1,646	1,890	1,944	
Average Speed		378	411	384	381	418	
Missions (4 passengers)	300 nm	Trip Fuel	2,704	4,246	3,177	3,865	4,473
		Specific Range/Altitude	0.517/FL 410	0.628/FL 490	0.518/FL 450	0.489/FL 450	0.435/FL 450
		Runway	2,626	2,822	2,479	2,604	2,613
		Flight Time	0+52	0+45	0+49	0+49	0+47
	600 nm	Fuel Used	804	846	899	972	1,058
		Specific Range/Altitude	0.373/FL 370	0.355/FL 410	0.334/FL 370	0.309/FL 370	0.284/FL 390
		Runway	2,694	3,025	2,694	2,617	2,747
		Flight Time	1+38	1+26	1+35	1+35	1+29
	1,000 nm	Fuel Used	1,362	1,313	1,460	1,576	1,735
		Specific Range/Altitude	0.441/FL 390	0.457/FL 450	0.411/FL 410	0.381/FL 410	0.346/FL 410
		Runway	3,006	3,336	2,994	2,786	2,808
		Flight Time	2+43	2+21	2+36	2+37	2+26
		Fuel Used	2,018	1,980	2,162	2,324	2,471
Specific Range/Altitude	0.496/FL 410	0.505/FL 450	0.463/FL 430	0.430/FL 430	0.405/FL 450		
Remarks	Certification Basis	FAR 23, 2013	FAR 23 Commuter category	FAR 23, 2000/05	FAR 23 Commuter category, 2004/2014; Garmin G3000.	FAR 23 Commuter category, 2009	FAR 23 Commuter category, 2010

JETS 20,000-LB. MTOW OR GREATER

Manufacturer		Bombardier	Textron Aviation	Bombardier	Bombardier	Gulfstream Aero.	Textron Aviation	
Model		Learjet 70 Model 45	Citation XLS+ CE-560XL	Learjet 75 Model 45	Learjet 60XR Model 60	Gulfstream 150 G150	Citation Latitude CE-680A	
B&CA Equipped Price		\$11,300,000	\$12,920,000	\$13,800,000	\$14,674,000*	\$15,700,000	\$16,250,000	
Characteristics	Seating	2+6/7	2+9/12	2+8/9	2+7/9	2+7/9	2+9/10	
	Wing Loading	69.0	54.6	69.0	88.8	82.3	NA	
	Power Loading	2.79	2.45	2.79	2.55	2.95	NA	
	Noise (EPNdB): TO/Sideline/APR	75.5/85.0/93.4	72.2/86.8/92.8	75.5/85.0/93.4	70.8/83.1/87.7	80.7/91.2/91.9	NA/NA/NA	
External Dimensions (ft.)	Length	56.0	52.5	58.0	58.7	56.8	62.3	
	Height	14.0	17.2	14.0	14.6	19.1	20.9	
	Span	50.9	56.3	50.9	43.8	55.6	72.3	
Internal Dimensions (ft.)	Length: OA/Net	17.7/17.7	18.5/18.5	19.8/19.8	17.7/15.8	17.7/17.7	28.1/21.8	
	Height	4.9	5.7	4.9	5.7	5.8	6.0	
	Width: Max/Floor	5.1/3.2	5.5/3.9	5.1/3.2	5.9/3.8	5.8/4.7	6.4/4.1	
Baggage	Internal: Cu. ft./lb.	15/150	10/100	15/150	24/350	25/NA	26/NA	
	External: Cu. ft./lb.	50/500	80/700	50/500	24/300	55/1,100	100/1,000	
Power	Engines	2 Hon TFE731-40BR	2 P&WC PW545C	2 Hon TFE731-40BR	2 P&WC PW305A	2 Hon TFE731-40AR-200G	2 P&WC PW306D	
	Output (lb. each)/Flat Rating	3,850/ISA+23C	4,119/ISA+10C	3,850/ISA+23C	4,600/ISA+17C	4,420/ISA+13C	5,852/ISA+15C	
	Inspection Interval	6,000t	5,000t	6,000t	6,000t	6,000c	6,000t	
Weights (lb.)	Max Ramp	21,750	20,400	21,750	23,750	26,250	NA	
	Max Takeoff	21,500	20,200	21,500	23,500	26,100	NA	
	Max Landing	19,200	18,700	19,200	19,500	21,700	NA	
	Zero Fuel	16,000c	15,100c	16,000c	17,000c	17,500c	NA	
	BOW	13,715	12,860	13,890	14,896	15,200	NA	
	Max Payload	2,285	2,240	2,110	2,104	2,300	NA	
	Useful Load	8,035	7,540	7,860	8,854	11,050	NA	
	Executive Payload	1,200	1,800	1,600	1,400	1,400	1,800	
	Max Fuel	6,062	6,740	6,062	7,910	10,300	NA	
	Available Payload w/Max Fuel	1,973	800	1,798	944	750	1,000	
	Available Fuel w/Max Payload	5,750	5,300	5,750	6,750	8,750	NA	
Available Fuel w/Executive Payload	6,062	5,740	6,062	7,454	9,650	NA		
Limits	Mwo	0.810	0.750	0.810	0.810	0.850	0.800	
	Trans. Alt. FL/Wwo	FL 270/330	FL 265/305	FL 270/330	FL 270/330	FL 300/330	FL 298/305	
	PSI	9.4	9.3	9.4	9.4	8.8	9.7	
Airport Performance	TOFL (SL elev./ISA temp.)	4,440	3,560	4,440	5,450	5,012	4,030	
	TOFL (5,000' elev.@25C)	5,091	5,430	5,186	8,540	8,120	5,000	
	Hot/High Weight Limit	20,447	20,200	20,622	23,402p	26,100	NA	
	NBAA IFR Range	1,934	1,740	1,912	2,275	2,988	NA	
	V ₂ @SL ISA, MTOW	125	118	125	147	131	NA	
	VREF w/4 Pax, NBAA IFR Res.	112	106	113	131	115	NA	
	Landing Distance w/4 Pax, NBAA IFR Res.	2,332	2,740	2,347	3,049	2,442	2,250	
Climb	Time to Climb/Altitude	15/FL 370	15/FL 370	15/FL 370	13/FL 370	17/FL 370	15/FL 370	
	FAR 25 Engine-Out Rate (fpm)	430	765	430	718	438	NA	
	FAR 25 Engine-Out Gradient (ft./nm)	207	389	207	293	201	NA	
Ceilings (ft.)	Certificated	51,000	45,000	51,000	51,000	45,000	45,000	
	All-Engine Service	44,700	45,000	44,700	42,400	42,400	43,000	
	Engine-Out Service	27,900	28,600	27,900	24,300	26,400	NA	
	Sea-Level Cabin	25,700	25,230	25,700	25,700	23,000	NA	
Cruise	Long Range	TAS	437	353	437	423	430	NA
		Fuel Flow	961	865	970	1,128	1,184	NA
		Altitude	FL 470	FL 450	FL 470	FL 430	FL 430	NA
		Specific Range	0.455	0.408	0.451	0.375	0.363	NA
	High Speed	TAS	453	431	452	446	475	396
		Fuel Flow	1,082	1,238	1,080	1,288	1,938	1,750
		Altitude	FL 470	FL 410	FL 470	FL 430	FL 350	FL 390
		Specific Range	0.419	0.348	0.419	0.346	0.245	0.226
NBAA IFR Ranges (200-nm alternate)	Max Payload (w/available fuel)	Nautical Miles	1,595	1,150	1,595	1,742	2,335	NA
		Average Speed	422	383	422	413	415	NA
		Trip Fuel	4,285	3,663	4,285	5,255	7,265	NA
	Max Fuel (w/available payload)	Specific Range/Altitude	0.372/FL 470	0.314/FL 450	0.372/FL 470	0.331/FL 410	0.321/FL 450	NA/NA
		Nautical Miles	1,747	1,745	1,747	2,243	3,011	2,500
		Average Speed	424	395	424	415	418	NA
	Four Passengers (w/available fuel)	Trip Fuel	4,616	5,236	4,616	6,486	8,903	NA
		Specific Range/Altitude	0.378/FL 470	0.333/FL 450	0.378/FL 470	0.346/FL 410	0.338/FL 450	NA/FL 450
		Nautical Miles	1,934	1,719	1,912	2,292	2,988	NA
	Ferry	Average Speed	425	395	425	414	418	NA
		Trip Fuel	4,803	5,168	4,793	6,594	8,850	NA
		Specific Range/Altitude	0.403/FL 470	0.333/FL 450	0.399/FL 470	0.348/FL 410	0.338/FL 450	NA/NA
Missions (4 passengers)	300 nm	Nautical Miles	2,039	1,785	2,015	2,398	3,122	NA
		Average Speed	425	403	425	412	419	NA
		Trip Fuel	4,848	5,268	4,838	6,642	8,945	NA
		Specific Range/Altitude	0.421/FL 490	0.339/FL 450	0.416/FL 490	0.361/FL 410	0.349/FL 450	NA/NA
	600 nm	Runway	3,595	2,734	3,606	3,308	3,623	NA
		Flight Time	0+45	0+46	0+45	0+45	0+50	NA
		Fuel Used	1,097	1,246	1,104	1,109	1,230	NA
		Specific Range/Altitude	0.273/FL 450	0.241/FL 390	0.272/FL 450	0.271/FL 450	0.244/FL 450	NA/NA
	1,000 nm	Runway	3,642	2,758	3,654	3,552	3,783	NA
		Flight Time	1+24	1+29	1+24	1+26	1+32	NA
		Fuel Used	1,885	2,094	1,898	1,909	1,974	NA
		Specific Range/Altitude	0.318/FL 450	0.287/FL 410	0.316/FL 450	0.314/FL 450	0.304/FL 450	NA/NA
Remarks	Certification Basis	FAR 25, EASA CS 25	FAR 25, 2008	FAR 25, EASA CS 25	FAR 25, 1981/92/2006 *2013 dollars.	FAR 25 A108, 2005	FAR 25 pending All data preliminary; Garmin G5000.	
		Runway	3,708	3,028	3,720	3,928	3,971	NA
		Flight Time	2+16	2+26	2+17	2+21	2+28	NA
		Fuel Used	2,981	3,211	2,995	3,011	2,998	NA
Specific Range/Altitude	0.335/FL 450	0.311/FL 430	0.334/FL 450	0.332/FL 450	0.334/FL 450	NA/NA		

JETS 20,000-LB. MTOW OR GREATER

Manufacturer		Textron Aviation	Embraer	Textron Aviation	Gulfstream Aero.	Bombardier	Embraer	
Model		Citation Sovereign+ CE-680	Legacy 500 EMB-550	Cessna Citation X+ CE-750	Gulfstream 280 G280	Challenger 300 BD-100-1A10	Legacy 600 EMB-135BJ	
B&CA Equipped Price		\$18,110,000	\$19,995,000	\$23,500,000	\$24,500,000	\$24,860,000	\$26,000,000	
Characteristics	Seating	2+9/12	2+8/12	2+9/12	2+10/19	2+9/11	2+13/14	
	Wing Loading	56.7	NA	NA	80.0	74.4	90.0	
	Power Loading	2.60	NA	2.60	2.60	2.85	3.12	
	Noise (EPNdB): TO/Sideline/APR	71.9/87.2/88.1	NA/NA/NA	NA/NA/NA	75.2/89.5/90.5	75.5/87.6/89.6	79.7/86.8/91.3	
External Dimensions (ft.)	Length	63.5	68.1	73.6	66.8	68.7	86.4	
	Height	20.3	21.2	19.2	21.3	20.0	22.2	
	Span	72.3	66.4	69.2	63.0	63.8	69.5	
Internal Dimensions (ft.)	Length: OA/Net	25.3/25.3	27.5/24.6	25.2/25.2	32.3/25.8	28.6/19.6	49.8/42.4	
	Height	5.7	6.0	5.7	6.3	6.1	6.0	
Baggage	Width: Max/Floor	5.5/3.9	6.8/4.7	5.5/3.9	7.2/5.7	7.2/5.1	6.9/5.2	
	Internal: Cu. ft./lb.	35/435	40/NA	22/NA	154/1,980	106/750	286/1,441	
Power	External: Cu. ft./lb.	100/1,000	110/NA	82/775	—/—	—/—	—/—	
	Engines	2 P&WC PW306D	2 Hon HTF7500E	2 RR AE3007C2	2 Hon HTF7250G	2 Hon HTF 7000	2 RR AE 3007 A1E	
	Output (lb. each)/Flat Rating	5,907/ISA+16C	6,540/ISA+15C	7,034/ISA+15C	7,624/ISA+17C	6,826/ISA+15C	7,953/ISA+22C	
Weights (lb.)	Inspection Interval	6,000t	OC	4,500t*	OC	OC	OC	
	Max Ramp	31,025	NA	36,900	39,750	39,000	49,758	
	Max Takeoff	30,775	NA	36,600	39,600	38,850	49,604	
	Max Landing	27,575	NA	32,000	32,700	33,750	40,785	
	Zero Fuel	21,000c	NA	24,978c	28,200c	27,200c	35,274c	
	BOW	18,330	NA	22,464	24,150	23,850*	30,081	
	Max Payload	2,670	2,800	2,514	4,050	3,350	5,193	
	Useful Load	12,695	NA	14,436	15,600	15,150	19,677	
	Executive Payload	1,800	1,600	1,800	2,000	1,800	2,600	
	Max Fuel	11,390	NA	12,931	14,600	14,043	18,170	
	Available Payload w/Max Fuel	1,305	1,600	1,505	1,000	1,107	1,507	
	Available Fuel w/Max Payload	10,025	NA	11,922	11,550	11,800	14,484	
Available Fuel w/Executive Payload	10,895	NA	12,636	13,600	13,350	17,077		
Limits	Mwo	0.800	0.830	0.935	0.850	0.830	0.800	
	Trans. Alt. FL/Wvo	FL 298/305	FL 295/320	FL 307/350	FL 280/340	FL 290/320	FL 276/320	
	PSI	9.3	9.6	9.3	9.2	8.8	8.4	
Airport Performance	TOFL (SL elev./ISA temp.)	3,530	4,600	5,280	4,750	4,810	5,614	
	TOFL (5,000' elev.@25C)	4,795	NA	7,300	7,320	6,860	7,604	
	Hot/High Weight Limit	30,345	NA	35,400p	39,600	38,545	49,604	
	NBAA IFR Range	3,085	NA	3,164	3,600	3,250	3,453	
	V2@SL ISA, MTOW	117	NA	NA	137	130	139	
	Vref w/4 Pax, NBAA IFR Res.	96	NA	NA	117	113	113	
	Landing Distance w/4 Pax, NBAA IFR Res.	2,149	NA	2,735	2,642	2,290	2,301	
Climb	Time to Climb/Altitude	13/FL 370	14/FL 370	14/FL 370	14/FL 370	14/FL 370	21/FL 370	
	FAR 25 Engine-Out Rate (fpm)	735	NA	NA	845	474	630	
	FAR 25 Engine-Out Gradient (ft./nm)	377	NA	NA	371	219	272	
Ceilings (ft.)	Certificated	47,000	45,000	51,000	45,000	45,000	41,000	
	All-Engine Service	45,000	44,000	45,000	45,000	44,000	40,900	
	Engine-Out Service	29,740	NA	NA	27,500	27,800	23,276	
	Sea-Level Cabin	25,230	26,520	25,230	25,000	23,100	21,650	
Cruise	Long Range	TAS	368	421	470	459	459	424
		Fuel Flow	1,059	NA	1,427	1,478	1,584	1,879
		Altitude	FL 450	NA	FL 470	FL 450	FL 450	FL 410
	High Speed	Specific Range	0.347	NA	0.329	0.311	0.290	0.226
		TAS	448	467	516	482	470	455
		Fuel Flow	1,756	NA	2,329	1,910	1,809	2,545
NBAA IFR Ranges (200-nm alternate)	Max Payload (w/available fuel)	Altitude	FL 390	NA	FL 410	FL 430	FL 430	FL 370
		Specific Range	0.255	NA	0.222	0.252	0.260	0.179
		Nautical Miles	2,484	NA	2,813	2,544	2,522	2,417
	Max Fuel (w/available payload)	Average Speed	396	NA	463	434	445	414
		Trip Fuel	8,170	NA	9,959	9,591	9,889	12,242
		Specific Range/Altitude	0.304/FL 470	NA/NA	0.282/FL 490	0.265/FL 450	0.255/FL 450	0.197/FL 410
	Four Passengers (w/available fuel)	Nautical Miles	3,025	NA	3,229	3,590	3,229	3,376
		Average Speed	400	NA	464	441	448	407
		Trip Fuel	9,661	NA	11,122	12,657	12,203	16,065
	Ferry	Specific Range/Altitude	0.313/FL 470	NA/NA	0.290/FL 490	0.284/FL 450	0.265/FL 450	0.210/FL 410
		Nautical Miles	3,061	3,000	3,295	3,600	3,250	3,430
		Average Speed	401	NA	464	442	448	406
Missions (4 passengers)	300 nm	Trip Fuel	9,676	NA	11,151	12,761	12,213	16,094
		Specific Range/Altitude	0.316/FL 470	NA/FL 450	0.295/FL 490	0.282/FL 450	0.266/FL 450	0.213/FL 410
		Nautical Miles	3,130	NA	3,380	3,686	3,310	3,485
	600 nm	Average Speed	405	NA	465	442	448	402
		Trip Fuel	9,705	NA	11,188	12,792	12,239	16,122
		Specific Range/Altitude	0.323/FL 470	NA/NA	0.302/FL 490	0.288/FL 450	0.270/FL 450	0.216/FL 410
	1,000 nm	Runway	2,592	NA	3,740	2,957	3,370	3,522
		Flight Time	0+45	NA	0+40	0+48	0+47	0+48
		Fuel Used	1,507	NA	1,847	1,524	1,578	1,894
	Remarks	Specific Range/Altitude	0.199/FL 390	NA/NA	0.162/FL 370	0.197/FL 450	0.190/FL 450	0.158/FL 410
		Runway	2,600	NA	3,790	2,997	3,420	3,716
		Flight Time	1+26	1+31	1+15	1+27	1+26	1+37
Remarks	Fuel Used	2,406	2,474	2,915	2,443	2,568	3,044	
	Specific Range/Altitude	0.249/FL 430	0.243/FL 450	0.206/FL 430	0.246/FL 450	0.234/FL 450	0.197/FL 410	
	Runway	2,650	NA	3,860	3,136	3,498	3,789	
Remarks	Flight Time	2+21	NA	2+02	2+19	2+18	2+36	
	Fuel Used	3,753	NA	4,588	3,692	3,910	4,731	
	Specific Range/Altitude	0.266/FL 430	NA/NA	0.218/FL 430	0.271/FL 450	0.256/FL 450	0.211/FL 410	
Remarks	Certification Basis	FAR 25, 2013 Garmin G5000.	FAR 25, EASA CS 25, pending All data preliminary.	FAR 25, 2014 Garmin G5000; *Engine flight hour inspection interval.	FAR 25, 2012 and EASA CS 25, 2013	FAR 25 A 98 and JAR 25 Chg 15 *B&CA Operators Survey BOW 24,120 lb.	FAR 25, 2002	

JETS 20,000-LB. MTOW OR GREATER

Manufacturer		Bombardier	Dassault	Bombardier	Embraer	Bombardier	
Model		Challenger 350 BD-100-1A10	Falcon 2000S Falcon 2000EX	Challenger 605 CL-600-2B16	Legacy 650 EMB-135BJ*	Challenger 850 CL-600-2B19	
B&CA Equipped Price		\$26,540,000	\$27,700,000	\$31,100,000	\$31,600,000	\$31,981,000*	
Characteristics	Seating	2+9/11	2+10/19	3+10/19	2+13/14	2+14/15	
	Wing Loading	77.8	77.7	107.1	97.2	101.8	
	Power Loading	2.77	2.93	2.76	2.97	3.04	
	Noise (EPNdB): TO/Sideline/APR	75.5/87.6/89.6	75.1/91.8/90.5	81.2/86.2/90.3	78.0/86.9/91.7	78.8/82.4/92.1	
External Dimensions (ft.)	Length	68.7	66.3	68.4	68.4	87.8	
	Height	20.0	23.2	20.7	21.8	20.4	
	Span	69.0	70.2	64.3	69.5	69.6	
Internal Dimensions (ft.)	Length: OA/Net	28.6/19.6	31.2/26.2	28.3/25.5	49.8/42.4	48.4/40.2	
	Height	6.1	6.2	6.1	6.0	6.0	
	Width: Max/Floor	7.2/5.1	7.7/6.3	7.9/6.9	6.9/5.2	7.9/6.9	
Baggage	Internal: Cu. ft./lb.	106/750	131/1,600	115/900	286/1,441	147/900	
	External: Cu. ft./lb.	—/—	—/—	—/—	—/—	—/—	
Power	Engines	2 Hon HTF 7350	2 P&WC PW308C	2 GE CF34-3B	2 RR AE 3007A2	2 GE CF34-3B1	
	Output (lb. each)/Flat Rating	7,323/ISA+15C	7,000/ISA+15C	8,729/ISA+15C	9,020/ISA+15C	8,729/ISA+8C	
	Inspection Interval	OC	7,000c	OC	OC	OC	
Weights (lb.)	Max Ramp	40,750	41,200	48,300	53,727	53,250	
	Max Takeoff	40,600	41,000	48,200	53,572	53,000	
	Max Landing	34,150	39,300	38,000	44,092	47,000	
	Zero Fuel	28,200c	29,700c	32,000c	36,156c	44,000c	
	BOW	24,800	24,750	27,150	31,217	34,618	
	Max Payload	3,400	4,950	4,850	4,939	9,382	
	Useful Load	15,950	16,450	21,150	22,510	18,632	
	Executive Payload	1,800	2,000	2,000	2,600	2,800	
	Max Fuel	14,043	14,600	19,852	20,600	18,274	
	Available Payload w/Max Fuel	1,907	1,850	1,298	1,910	358	
Limits	Mwo	0.830	0.862	0.850	0.800	0.850	
	Trans. Alt. FL/Wvo	FL 290/320	FL 250/370	FL 222/348	FL 276/320	FL 254/335	
	PSI	8.8	9.3	8.8	8.4	8.6	
Airport Performance	TOFL (SL elev./ISA temp.)	4,835	4,325	5,840	5,741	6,305	
	TOFL (5,000' elev.@25C)	6,890	6,050	9,192	7,979	11,332	
	Hot/High Weight Limit	39,493	39,950	47,702	53,572	53,000p	
	NBAA IFR Range	3,250	3,555	4,038	3,953	2,986	
	V2@SL ISA, MTOW	NA	123	147	144	146	
	VREF w/4 Pax, NBAA IFR Res.	NA	106	117	115	126	
	Landing Distance w/4 Pax, NBAA IFR Res.	2,320	2,300	2,360	2,346	2,475	
Climb	Time to Climb/Altitude	14/FL 370	14/FL 370	21/FL 370	21/FL 370	32/FL 370	
	FAR 25 Engine-Out Rate (fpm)	NA	535	581	633	443	
	FAR 25 Engine-Out Gradient (ft./nm)	NA	261	237	259	182	
Ceilings (ft.)	Certificated	45,000	47,000	41,000	41,000	41,000	
	All-Engine Service	44,000	43,700	38,250	41,000	37,760	
	Engine-Out Service	NA	26,150	20,000	23,128	19,370	
	Sea-Level Cabin	23,100	25,300	23,000	21,650	21,100	
Cruise	Long Range	TAS	459	437	424	425	424
		Fuel Flow	1,574	1,455	1,828	1,901	2,061
		Altitude	FL 450	FL 450	FL 410	FL 410	FL 390
	High Speed	Specific Range	0.292	0.300	0.232	0.224	0.206
		TAS	470	482	470	459	459
		Fuel Flow	1,849	2,280	2,443	2,570	2,393
NBAA IFR Ranges (200-nm alternate)	Max Payload (w/available fuel)	Altitude	FL 450	FL 450	FL 410	FL 410	FL 390
		Specific Range	0.292	0.300	0.232	0.224	0.206
		Nautical Miles	2,702	2,450	3,010	3,076	1,116
		Average Speed	448	426	416	417	402
	Max Fuel (w/available payload)	Trip Fuel	10,633	9,640	14,256	15,238	6,759
		Specific Range/Altitude	0.254/FL 450	0.254/FL 450	0.211/FL 410	0.202/FL 410	0.165/FL 370
		Nautical Miles	3,166	3,445	3,973	3,839	3,089
		Average Speed	438	429	418	417	416
	Four Passengers (w/available fuel)	Trip Fuel	12,171	12,740	17,939	18,380	16,111
		Specific Range/Altitude	0.260/FL 450	0.270/FL 470	0.221/FL 410	0.209/FL 410	0.192/FL 390
		Nautical Miles	3,250	3,540	4,047	3,919	2,986
		Average Speed	449	431	418	415	416
Ferry	Trip Fuel	12,203	12,740	18,105	18,422	15,652	
	Specific Range/Altitude	0.266/FL 450	0.278/FL 470	0.224/FL 410	0.213/FL 410	0.191/FL 390	
	Nautical Miles	3,304	3,615	4,121	3,980	3,110	
	Average Speed	451	430	418	414	416	
Missions (4 passengers)	300 nm	Trip Fuel	12,225	12,740	18,134	18,450	16,124
		Specific Range/Altitude	0.270/FL 450	0.284/FL 470	0.227/FL 410	0.216/FL 410	0.193/FL 390
		Runway	3,570	2,900	3,389	3,346	3,858
		Flight Time	0+47	0+48	0+47	0+49	0+48
	600 nm	Fuel Used	1,583	1,525	1,593	1,773	2,143
		Specific Range/Altitude	0.190/FL 450	0.197/FL 450	0.188/FL 390	0.169/FL 410	0.140/FL 390
		Runway	3,620	2,905	3,428	3,518	4,109
		Flight Time	1+26	1+28	1+25	1+34	1+28
	1,000 nm	Fuel Used	2,577	2,465	3,065	3,146	3,603
		Specific Range/Altitude	0.233/FL 450	0.243/FL 470	0.196/FL 390	0.191/FL 410	0.167/FL 390
		Runway	3,680	3,050	3,490	3,573	4,474
		Flight Time	2+18	2+21	2+16	2+33	2+21
Remarks	Fuel Used	3,925	3,755	5,097	4,815	5,648	
	Specific Range/Altitude	0.255/FL 450	0.266/FL 470	0.196/FL 390	0.208/FL 410	0.177/FL 390	
Certification Basis		FAR 25 A 98 and FAR 25 Chg 15 All data preliminary.	FAR/EASA 25, 2013 EASy II flight deck; 2015 delivery price	FAR 25, 1980/83/87/95/2006 Pro Line 21; Class III EFB with IFIS.	FAR 25, 2011 *Factory modification DCA 145-000- 00020/2008	FAR/JAR 25, 1992 Optional ISA+15C engine flat-rating; *2013 dollars.	

JETS 20,000-LB. MTOW OR GREATER

Manufacturer		Dassault	Gulfstream Aerospace	Dassault	Bombardier	Dassault	
Model		Falcon 2000LXS Falcon 2000EX	Gulfstream 450 GIV-X	Falcon 900LX Falcon 900EX	Global 5000 BD-700-1A11	Falcon 7X Falcon 7X	
B&CA Equipped Price		\$32,900,000	\$42,200,000	\$42,200,000	\$50,190,000	\$52,800,000	
Characteristics	Seating	2+8/19	2+14/19	2+12/19	3+13/19	3+12/19	
	Wing Loading	81.2	77.8	92.9	90.5	92.0	
	Power Loading	3.06	2.69	3.27	3.14	3.64	
	Noise (EPNdB): TO/Sideline/APR	76.4/91.7/90.5	76.2/89.5/92.3	78.2/90.3/92.1	81.3/88.9/89.7	82.3/90.1/92.6	
External Dimensions (ft.)	Length	66.3	89.3	66.3	96.8	76.1	
	Height	23.2	25.2	24.8	25.5	25.7	
	Span	70.2	77.8	70.2	94.0	86.0	
Internal Dimensions (ft.)	Length: OA/Net	31.2/26.2	45.1/37.0	39.0/33.2	45.7/40.7	46.5/39.1	
	Height	6.2	6.2	6.2	6.2	6.2	
	Width: Max/Floor	7.7/6.3	7.3/5.5	7.7/6.3	7.9/6.5	7.7/6.3	
Baggage	Internal: Cu. ft./lb.	131/1,600	169/2,000	127/2,866	195/1,000	140/2,004	
	External: Cu. ft./lb.	—/—	—/—	—/—	—/—	—/—	
Power	Engines	2 P&WC PW308C	2 RR Tay Mk 611-8C	3 Hon TFE731-60	2 RR BR700-710A2-20	3 P&WC PW307A	
	Output (lb. each)/Flat Rating	7,000/ISA+15C	13,850/ISA+15C	5,000/ISA+17C	14,750/ISA+20C	6,402/ISA+17C	
	Inspection Interval	7,000c	12,000t or OC	6,000c	OC	7,200c	
Weights (lb.)	Max Ramp	43,000	75,000	49,200	92,750	70,200	
	Max Takeoff	42,800	74,600	49,000	92,500	70,000	
	Max Landing	39,300	66,000	44,500	78,600	62,400	
	Zero Fuel	29,700c	49,000c	30,864c	58,000c	41,000c	
	BOW	24,750	43,200	26,750	50,861	36,600	
	Max Payload	4,950	5,800	4,114	7,139	4,400	
	Useful Load	18,250	31,800	22,450	41,889	33,600	
	Executive Payload	1,600	2,800	2,400	2,600	2,400	
	Max Fuel	16,660	29,281	20,905	38,959	31,940	
	Available Payload w/Max Fuel	1,590	2,519	1,545	2,930	1,660	
Limits	Available Fuel w/Max Payload	13,300	26,000	18,336	34,750	29,200	
	Available Fuel w/Executive Payload	16,650	29,000	20,050	38,959	31,200	
Limits	Mwo	0.862	0.880	0.870	0.890	0.900	
	Trans. Alt. FL/Vwo	FL 250/370	FL 280/340	FL 250/370	FL 303/340	FL 270/370	
	PSI	9.3	9.6	9.6	10.3	10.2	
Airport Performance	TOFL (SL elev./ISA temp.)	4,675	5,600	5,360	5,540	5,710	
	TOFL (5,000' elev.@25C)	6,800	8,200	7,615	6,798	8,045	
	Hot/High Weight Limit	42,010	74,600	48,255	88,373	69,140	
	NBAA IFR Range	4,095	4,328	4,710	5,185	5,795	
	V ₂ @SL ISA, MTOW	127	150	134	133	133	
	V _{REF} w/4 Pax, NBAA IFR Res.	106	123	111	107	106	
Climb	Landing Distance w/4 Pax, NBAA IFR Res.	2,300	2,663	2,432	2,189	2,120	
	Time to Climb/Altitude	16/FL 370	16/FL 370	18/FL 370	18/FL 370	18/FL 370	
	FAR 25 Engine-Out Rate (fpm)	464	712	703	704	615	
Ceilings (ft.)	FAR 25 Engine-Out Gradient (ft./nm)	219	285	315	318	280	
	Certificated	47,000	45,000	51,000	51,000	51,000	
	All-Engine Service	43,700	42,400	40,100	44,600	41,360	
	Engine-Out Service	26,150	25,000	31,400	20,600	31,560	
Cruise	Sea-Level Cabin	25,300	26,700	25,300	30,125	29,200	
	Long Range	TAS	437	459	431	470	459
		Fuel Flow	1,485	2,585	1,670	2,856	2,260
		Altitude	FL 450	FL 450	FL 430	FL 450	FL 430
	High Speed	Specific Range	0.294	0.178	0.258	0.165	0.203
		TAS	482	476	474	505	497
Fuel Flow		2,315	3,055	2,230	3,582	3,205	
NBAA IFR Ranges (200-nm alternate)	Max Payload (w/available fuel)	Altitude	FL 390	FL 410	FL 390	FL 410	FL 390
		Specific Range	0.208	0.156	0.213	0.141	0.155
		Nautical Miles	2,905	3,549	3,810	4,958	5,000
	Max Fuel (w/available payload)	Average Speed	428	452	420	463	453
		Trip Fuel	11,475	22,622	16,386	33,418	26,820
		Specific Range/Altitude	0.253/FL 450	0.157/FL 450	0.233/FL 430	0.148/FL 470	0.186/FL 450
	Four Passengers (w/available fuel)	Nautical Miles	3,980	4,216	4,595	5,381	5,670
		Average Speed	431	453	421	463	454
		Trip Fuel	14,835	26,023	18,955	35,695	29,560
	Ferry	Specific Range/Altitude	0.268/FL 470	0.162/FL 450	0.242/FL 430	0.151/FL 470	0.192/FL 470
Nautical Miles		4,075	4,328	4,695	5,520	5,760	
Average Speed		431	452	420	463	454	
Missions (4 passengers)	300 nm	Trip Fuel	14,835	26,087	18,955	35,761	29,560
		Specific Range/Altitude	0.275/FL 470	0.166/FL 450	0.248/FL 430	0.154/FL 470	0.195/FL 470
		Nautical Miles	4,145	4,382	4,765	5,572	5,840
	600 nm	Average Speed	431	453	420	463	454
		Trip Fuel	14,835	26,116	18,955	35,786	29,560
		Specific Range/Altitude	0.279/FL 450	0.168/FL 450	0.251/FL 430	0.156/FL 470	0.198/FL 470
	1,000 nm	Runway	2,900	3,225	2,880	2,483	2,500
		Flight Time	0+48	0+46	0+47	0+46	0+46
		Fuel Used	1,525	2,599	1,595	2,755	2,075
	Remarks	Specific Range/Altitude	0.197/FL 450	0.115/FL 450	0.188/FL 450	0.109/FL 490	0.145/FL 450
Runway		2,905	3,258	2,870	2,572	2,515	
Flight Time		1+28	1+25	1+27	1+23	1+25	
Remarks	Fuel Used	2,465	4,113	2,630	4,442	3,285	
	Specific Range/Altitude	0.243/FL 470	0.146/FL 450	0.228/FL 470	0.135/FL 490	0.183/FL 470	
	Runway	3,050	3,304	2,880	2,693	2,640	
Remarks	Flight Time	2+21	2+18	2+20	2+13	2+17	
	Fuel Used	3,755	6,176	4,075	6,747	4,945	
	Specific Range/Altitude	0.266/FL 470	0.162/FL 450	0.245/FL 470	0.148/FL 470	0.202/FL 470	
Certification Basis		FAR/EASA 25, 2013 EASy II flight deck; 2015 delivery price.	FAR 25, 2004	FAR 25/EASA 25, 1979/2010 EASy II flight deck; 2015 delivery price.	FAR 25, 1998/2004 and EASA 25, 2004 Global Vision flight deck.	FAR/EASA 25, 2007 EASy II flight deck; DFCS; 2015 delivery price.	

JETS 20,000-LB. MTOW OR GREATER

Manufacturer		Embraer	Airbus	Boeing	Airbus	Boeing	
Model		Lineage 1000E ERJ 190-100 ECJ	ACJ318 A318-112	BBJ2 737-800	A320 Prestige A320-214	BBJ3 737-900ER	
B&CA Equipped Price		\$53,000,000	\$72,000,000	\$91,500,000	\$95,000,000	\$99,300,000	
Characteristics	Seating	3+13/19	4+18/132	4+19/189	4+18/179	4+19/215	
	Wing Loading	120.7	113.6	129.9	130.3	139.9	
	Power Loading	3.25	3.22	3.19	3.18	3.44	
	Noise (EPNdB): TO/Sideline/APR	86.4/92.7/92.5	83.0/91.9/93.9	86.0/94.4/96.4	85.5/93.4/95.5	88.4/93.8/96.4	
External Dimensions (ft.)	Length	118.9	103.2	129.5	123.3	138.2	
	Height	34.7	41.1	41.2	38.6	41.2	
	Span	94.2	111.8	117.4	111.8	117.4	
Internal Dimensions (ft.)	Length: OA/Net	84.3/84.3	70.2/70.2	98.3/98.3	90.3/90.3	107.2/107.2	
	Height	6.6	7.4	7.1	7.4	7.1	
	Width: Max/Floor	8.8/8.0	12.1/11.7	11.6/10.7	12.1/11.7	11.6/10.7	
Baggage	Internal: Cu. ft./lb.	323/2,293	395/NA	NA/NA	NA/NA	NA/NA	
	External: Cu. ft./lb.	120/705	430/NA	721/NA	985/NA	882/NA	
Power	Engines	2 GE CF34-10E7-B	2 CFMI CFM56-5B9/3*	2 CFMI CFM56-7B27E	2 CFMI CFM56-5B4/3*	2 CFMI CFM56-7B27E	
	Output (lb. each)/Flat Rating	18,500/ISA+15C	23,300/ISA+30C	27,300/ISA+15C	27,000/ISA+29C	27,300/ISA+15C	
	Inspection Interval	OC	OC	OC	OC	OC	
Weights (lb.)	Max Ramp	120,593	150,800	174,700	172,850	188,200	
	Max Takeoff	120,152	149,900	174,200	171,950	187,700	
	Max Landing	100,972	126,765	146,300	145,500	157,300	
	Zero Fuel	80,469c	120,150c	138,300c	137,800c	149,300c	
	BOW	70,548	96,694	103,800	109,000	111,650	
	Max Payload	9,921	23,456	34,500	28,800	37,650	
	Useful Load	50,045	54,106	70,900	63,850	76,550	
	Executive Payload	2,600	3,600	3,800	3,600	3,800	
	Max Fuel	48,217	48,660	69,961	53,450	73,472	
	Available Payload w/Max Fuel	1,828	5,446	939	10,400	3,078	
Limits	Available Fuel w/Max Payload	40,124	30,650	36,400	35,050	38,900	
	Available Fuel w/Executive Payload	47,445	48,660	67,100	53,450	72,750	
	Mwo	0.820	0.820	0.820	0.820	0.820	
Airport Performance	Trans. Alt. FL/Vmo	FL 289/320	FL 250/350	FL 260/340	FL 250/350	FL 260/340	
	PSI	8.8	8.2	9.0	8.3	9.0	
	TOFL (SL elev./ISA temp.)	6,076	5,870	6,670	6,920	8,350	
Climb	TOFL (5,000' elev.@25C)	9,500	7,660	12,850	9,355	14,500	
	Hot/High Weight Limit	112,038	149,900	174,200	171,950	175,500p	
	NBAA IFR Range	3,965	4,250	5,648	4,300	4,751	
	V2@SL ISA, MTOW	140	NA	152	NA	NA	
	Vher w/4 Pax, NBAA IFR Res.	110	NA	121	NA	122	
	Landing Distance w/4 Pax, NBAA IFR Res.	2,038	2,150	2,370	2,400	2,510	
	Time to Climb/Altitude	29/FL 350	20/FL 370	27/FL 370	23/FL 360	26/FL 350	
Ceilings (ft.)	FAR 25 Engine-Out Rate (fpm)	NA	NA	NA	NA	NA	
	FAR 25 Engine-Out Gradient (ft./nm)	NA	NA	NA	NA	NA	
	Certificated	41,000	41,000	41,000	39,000	41,000	
	All-Engine Service	35,000	NA	37,700	NA	35,000	
Cruise	Engine-Out Service	19,178	NA	20,000	NA	NA	
	Sea-Level Cabin	23,190	MA	24,000	NA	24,000	
	Long Range	TAS	454	444	454	451	455
		Fuel Flow	4,184	4,230	5,043	4,730	5,427
		Altitude	FL 380	FL 390	FL 390	FL 370	FL 360
	High Speed	Specific Range/Altitude	0.109/FL 400	0.105/FL 370	0.090/FL 370	0.095/FL 350	0.084/FL 350
		TAS	471	470	470	473	473
		Fuel Flow	5,033	5,360	5,721	5,860	6,272
	NBAA IFR Ranges (200-nm alternate)	Altitude	FL 350	FL 370	FL 360	350	FL 350
		Specific Range	0.094	0.088	0.082	0.081	0.075
Max Payload (w/available fuel)		Nautical Miles	3,493	2,048	2,279	2,100	2,223
		Average Speed	442	426	433	428	436
		Trip Fuel	35,569	24,129	29,968	27,936	32,052
Max Fuel (w/available payload)		Specific Range/Altitude	0.098/FL 400	0.085/FL 370	0.076/FL 370	0.075/FL 350	0.069/FL 350
		Nautical Miles	4,532	4,000	5,726	3,852	5,452
		Average Speed	446	437	445	438	447
Four Passengers (w/available fuel)		Trip Fuel	43,962	42,710	64,835	46,930	67,949
		Specific Range/Altitude	0.103/FL 410	0.094/FL 410	0.088/FL 410	0.082/FL 390	0.080/FL 390
	Nautical Miles	4,602	4,300	5,622	4,330	5,496	
Ferry	Average Speed	446	436	444	438	446	
	Trip Fuel	44,240	43,601	63,899	48,057	67,985	
	Specific Range/Altitude	0.104/FL 410	0.099/FL 410	0.088/FL 410	0.090/FL 390	0.081/FL 390	
Missions (4 passengers)	Nautical Miles	4,640	4,300	5,754	4,380	5,555	
	Average Speed	446	436	444	438	447	
	Trip Fuel	44,264	43,653	64,855	48,108	68,030	
	Specific Range/Altitude	0.105/FL 410	0.099/FL 410	0.089/FL 410	0.091/FL 390	0.082/FL 390	
	300 nm	Runway	3,002	3,675	3,245	3,670	3,700
		Flight Time	0+48	0+53	0+56	0+55	0+55
		Fuel Used	3,426	4,077	4,547	4,265	4,841
	600 nm	Specific Range/Altitude	0.088/FL 390	0.074/FL 370	0.066/FL 310	0.070/FL 350	0.062/FL 290
		Runway	3,133	3,700	3,365	3,700	3,855
		Flight Time	1+26	1+33	1+32	1+34	1+32
1,000 nm	Fuel Used	5,862	6,694	7,268	7,080	7,775	
	Specific Range/Altitude	0.102/FL 410	0.090/FL 410	0.083/FL 410	0.085/FL 390	0.077/FL 390	
	Runway	3,251	3,760	3,535	3,760	4,045	
Remarks	Flight Time	2+20	2+27	2+26	2+28	2+26	
	Fuel Used	9,063	10,225	11,088	10,970	11,943	
Specific Range/Altitude		0.110/FL 410	0.098/FL 410	0.090/FL 410	0.091/FL 390	0.084/FL 390	
Certification Basis		FAR/EASA 25, 2008	FAR 25, 2003 *Also avail with PW6124; incl. 2 add'l center tanks; price incl. VIP cabin.	FAR 25 A 77, 1967/98 All pax and range missions flown with eight passengers.	FAR 25, 1999 *Also avail. with 26,500-lbf IAEV2527M-A5; incl. 2 add'l center tanks and VIP cabin.	FAR 25 A 77, 1967/ 98/2007 All pax and range missions flown with eight passengers.	

ULTRA-LONG-RANGE JETS

Manufacturer		Gulfstream Aerospace	Bombardier	Gulfstream Aerospace	Boeing	Airbus	
Model		Gulfstream 550 GV-SP	Global 6000 BD-700-1A10	Gulfstream 650 GVI	BBJ 737-700IGW	ACJ319 A319-133	
B&CA Equipped Price		\$60,000,000	\$62,000,000	\$65,200,000*	\$73,500,000	\$87,000,000	
Characteristics	Seating	4+16/19	4+13/19	4+16/19	4+19/149	4+19/156	
	Wing Loading	80.1	97.4	77.6	127.5	127.8	
	Power Loading	2.96	3.37	2.95	3.13	3.12	
	Noise (EPNdB): TO/Sideline/APR	79.3/90.2/90.8	82.4/87.9/89.7	77.5/89.8/88.3	85.4/94.9/95.8	85.4/94.6/94.2	
External Dimensions (ft.)	Length	96.4	99.4	99.8	110.3	111.0	
	Height	25.8	25.5	25.7	41.2	38.6	
	Span	93.5	94.0	99.6	117.4	111.8	
Internal Dimensions (ft.)	Length: OA/Net	50.1/42.6	48.4/43.2	53.6/46.8	79.2/79.2	78.0/78.0	
	Height	6.2	6.2	6.4	7.1	7.4	
	Width: Max/Floor	7.3/5.5	7.9/6.5	8.5/7.0	11.6/10.7	12.2/11.6	
Baggage	Internal: Cu. ft./lb.	226/2,500	195/1,000	235/2,500	NA/NA	160/NA	
	External: Cu. ft./lb.	—/—	—/—	—/—	169/NA	NA/NA	
Power	Engines	2 RR BR700-710C4-11	2 RR BR700-710A2-20	2 RR BR700-725A1-12	2 CFMI CFM56-7B27E	2 CFMI CFM56-5B7/3*	
	Output (lb. each)/Flat Rating	15,385/ISA+15C	14,750/ISA+20C	16,900/ISA+15C	27,300/ISA+15C	27,000/ISA+29C	
	Inspection Interval	8,000t or OC	OC	10,000t	OC	OC	
Weights (lb.)	Max Ramp	91,400	99,750	100,000	171,500	169,530	
	Max Takeoff	91,000	99,500	99,600	171,000	168,650	
	Max Landing	75,300	78,600	83,500	134,000	137,790	
	Zero Fuel	54,500c	58,000c	60,500c	126,000c	128,970c	
	BOW	48,700	52,230	54,000	97,740	96,450**	
	Max Payload	5,800	5,770	6,500	28,260	32,520	
	Useful Load	42,700	47,520	46,000	73,760	73,080	
	Executive Payload	3,200	2,600	3,200	3,800	3,800	
	Max Fuel	40,994	44,716	44,200	71,737	72,560	
	Available Payload w/Max Fuel	1,706	2,804	1,800	2,023	520	
	Available Fuel w/Max Payload	36,900	41,750	39,500	45,500	40,560	
Available Fuel w/Executive Payload	39,500	44,716	42,800	69,960	69,280		
Limits	Mmo	0.885	0.890	0.925	0.820	0.820	
	Trans. Alt. FL/Vmo	FL 270/340	FL 303/340	FL 290/340	FL 260/340	FL 250/350	
Airport Performance	PSI	10.2	10.3	10.7	9.0	8.3	
	TOFL (SL elev./ISA temp.)	5,910	6,476	5,858	6,085	6,170	
	TOFL (5,000' elev.@25C)	9,070	7,880	9,000	10,200	8,360	
	Hot/High Weight Limit	91,000	94,513p	99,600	170,827	168,650	
	NBAA IFR Range	6,738	5,633	7,000	6,260	6,000	
	V ₂ @ SL, ISA, MTOW	147	142	146	141	137	
	V _{REF} w/4 Pax, NBAA IFR Res.	112	110	114	116	111	
Climb	Landing Distance w/4 Pax, NBAA IFR Res.	2,240	2,236	2,667	2,360	2,220	
	Time to Climb/Altitude	18/FL 370	20/FL 370	20/FL 370	25/FL 370	22/360	
	FAR 25 Engine-Out Rate (fpm)	594	474	NA	NA	NA	
Ceiling (ft.)	FAR 25 Engine-Out Gradient (ft./nm)	242	200	NA	NA	NA	
	Certificated	51,000	51,000	51,000	41,000	41,000	
Cruise	All-Engine Service	42,700	42,400	42,700	38,000	36,000	
	Engine-Out Service	25,820	18,000	25,000	20,500	18,000	
	Sea-Level Cabin	29,200	30,125	31,900	24,000	22,000	
	Long Range	TAS	459	470	488	452	447
		Fuel Flow	2,563	3,043	2,686	4,707	4,695
	High Speed	Altitude	FL 450	FL 450	FL 470	FL 390	FL 370
Specific Range		0.179	0.154	0.182	0.096	0.095	
TAS		488	499	516	470	470	
Fuel Flow		3,228	3,789	3,368	5,567	5,830	
NBAA IFR Ranges (200-nm alternate)	Altitude	FL 430	FL 410	FL 430	FL 370	FL 370	
	Specific Range	0.151	0.132	0.153	0.084	0.081	
	Max Payload (w/available fuel)	Nautical Miles	5,767	5,876	5,980	3,291	2,679
		Average Speed	452	463	474	437	434
		Trip Fuel	33,993	40,480	36,500	39,571	33,677
	Max Fuel (w/available payload)	Specific Range/Altitude	0.170/FL 490	0.145/FL 450	0.164/FL 490	0.083/FL 390	0.080/FL 370
		Nautical Miles	6,698	6,111	7,000	6,229	6,134
		Average Speed	454	464	476	442	442
	Eight Passengers (w/available fuel)	Trip Fuel	38,202	41,780	41,200	66,866	66,673
		Specific Range/Altitude	0.175/FL 490	0.146/FL 450	0.170/FL 510	0.093/FL 410	0.092/FL 410
		Nautical Miles	6,708	6,163	7,000	6,237	6,002
Ferry	Average Speed	453	464	476	442	442	
	Trip Fuel	38,205	41,780	41,200	66,871	65,558	
	Specific Range/Altitude	0.176/FL 490	0.148/FL 450	0.170/FL 510	0.093/FL 410	0.092/FL 410	
Missions (8 passengers)	1,000 nm	Nautical Miles	6,853	6,258	7,157	6,306	6,200
		Average Speed	454	464	477	442	442
		Trip Fuel	38,251	41,780	41,200	66,914	67,207
	3,000 nm	Specific Range/Altitude	0.179/FL 510	0.150/FL 470	0.174/FL 510	0.094/FL 410	0.092/FL 410
		Runway	3,436	2,832	3,283	3,480	4,075
		Flight Time	2+20	2+13	2+12	2+27	2+26
	6,000 nm	Fuel Used	5,599	6,838	5,891	10,422	10,370
		Specific Range/Altitude	0.179/FL 490	0.146/FL 490	0.170/FL 510	0.096/FL 410	0.096/FL 410
		Runway	3,599	3,818	3,586	4,275	4,280
	Remarks	Flight Time	6+42	6+20	6+18	6+55	6+54
		Fuel Used	15,474	19,461	16,191	29,650	30,070
Specific Range/Altitude		0.194/FL 490	0.154/FL 490	0.185/FL 510	0.101/FL 410	0.100/FL 410	
Remarks	Runway	5,277	6,144	5,214	5,870	6,160	
	Flight Time	13+15	12+31	12+29	13+34	13+35	
	Fuel Used	33,428	41,780	34,313	63,852	65,528	
Specific Range/Altitude	0.179/FL 490	0.144/FL 450	0.175/FL 510	0.094/FL 410	0.092/FL 410		
Certification Basis		FAR 25, 1997/2003/02	FAR 25, 1998/2003 and JAR 25 BEVS and Global Vision flight deck standard.	FAR, EASA CS 25, 2012 *B&CA estimate.	FAR 25 A 77, 1967/98	FAR 25, 1999 *Avail. with 26,500-lbf IAEV2527M-A5; incl. 6 add'l center tanks, VIP cabin; **Spec wt.	